SELECTED REFERENCE
24

METLAKATLA PENINSULA LEAD-BASED PAINT INVESTIGATION

FOR THE

METLAKATLA INDIAN COMMUNITY

METLAKATLA, ALASKA

RIDOLFI ENGINEERS Inc.

METLAKATLA PENINSULA
LEAD-BASED PAINT INVESTIGATION

Prepared for
Metlakatla Indian Community
Metlakatla, Alaska

Prepared by
Ridolfi Engineers Inc.
Seattle, Washington

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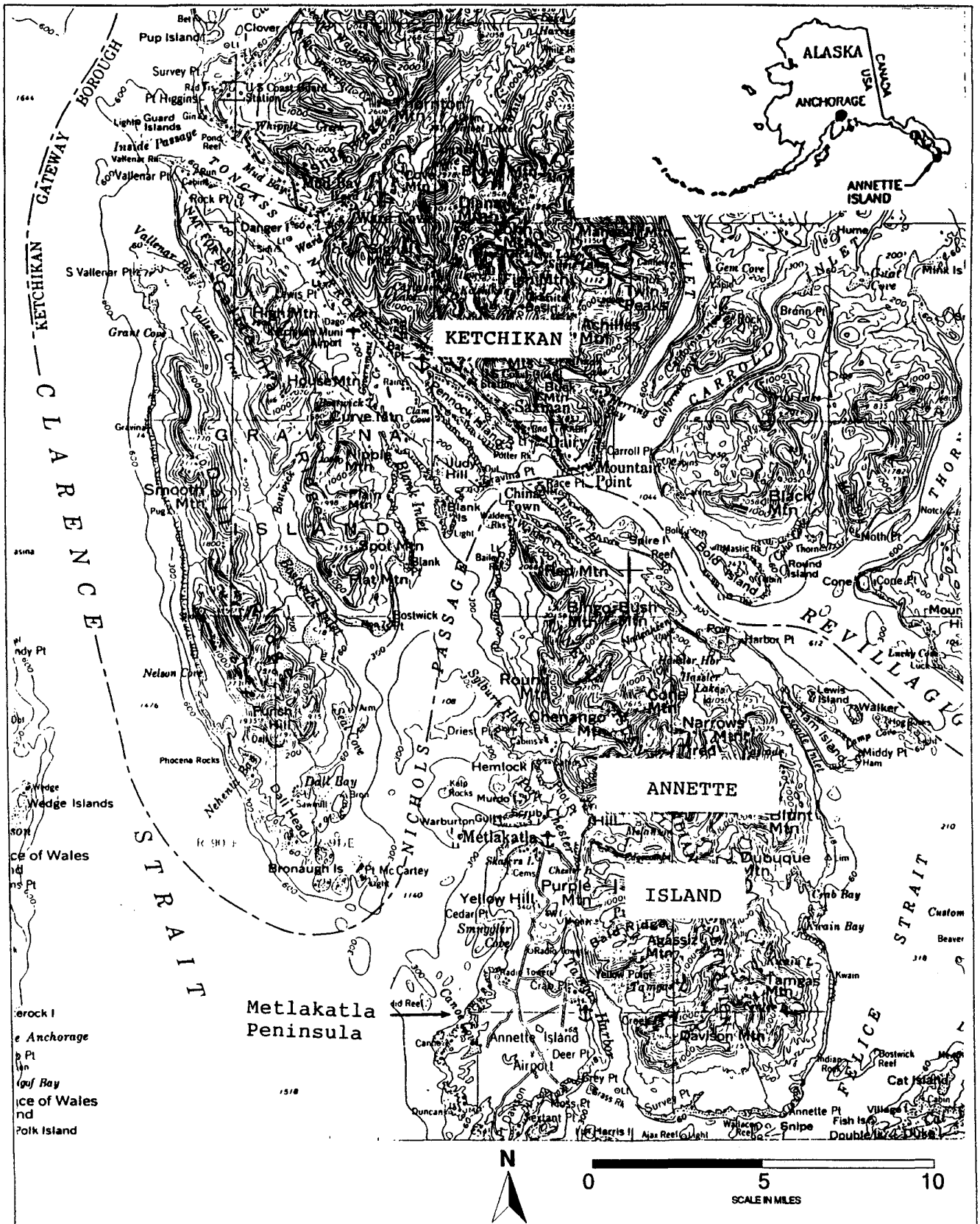
1.0 INTRODUCTION

Annette Island is an approximately 200-square-mile island located in the southernmost portion of the Alexander Archipelago in southeast Alaska. The island is located approximately 900 miles southeast of Anchorage, Alaska, and 700 miles northwest of Seattle, Washington. As shown in Figure 1, Ketchikan, Alaska, is approximately 20 miles northeast of the island.

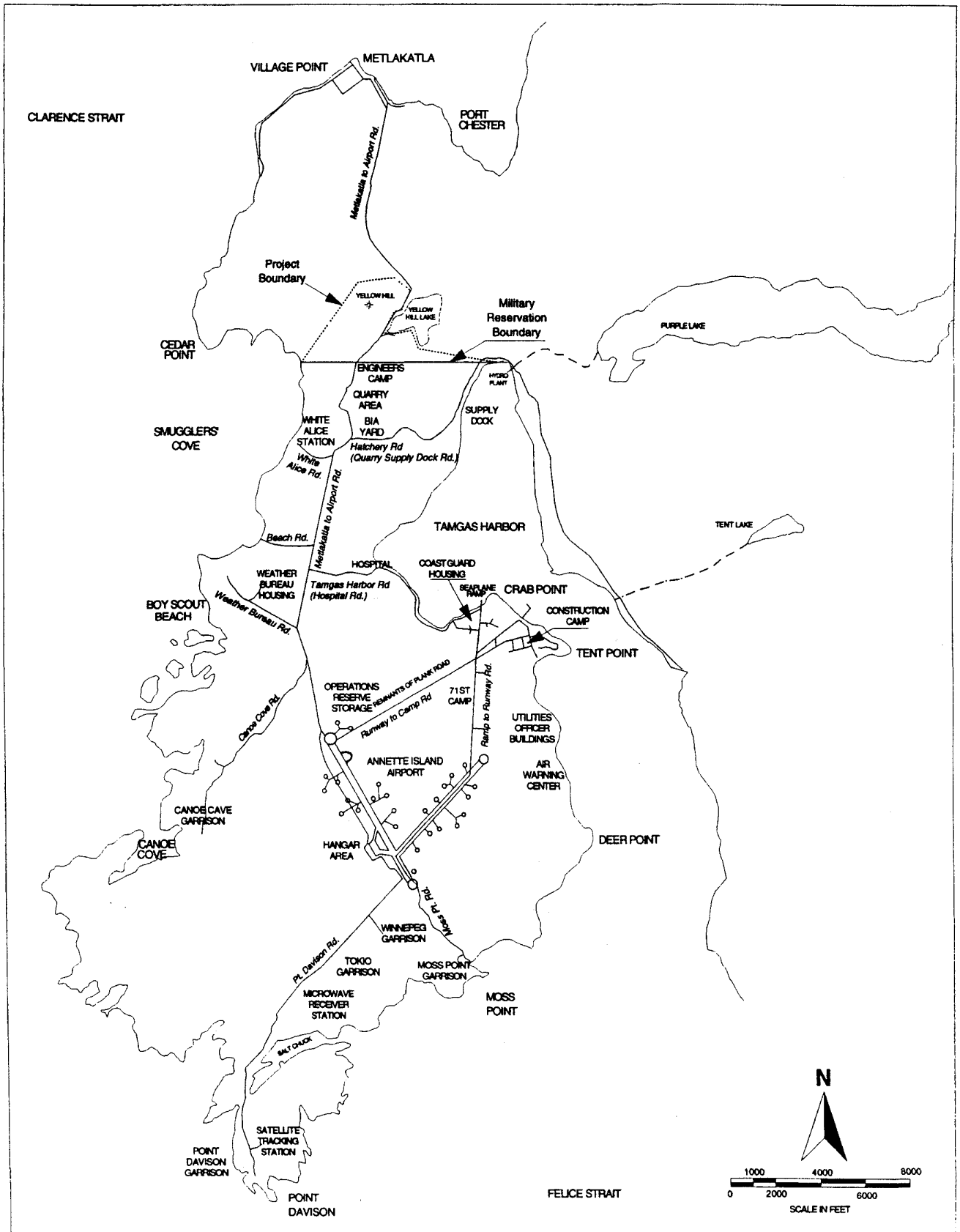
The Metlakatla Peninsula project site, including the former Annette Island airbase, is an area approximately 8 miles long and 3 miles wide located on the southwest side of Annette Island. As shown in Figure 2, the peninsula is bordered by the saltwater bodies of Tamgas Harbor on the east, Felice Strait on the south, Clarence Strait to the west, and Port Chester on the north. The Town of Metlakatla, with a population of approximately 1,500 to 1,600 people, is located on the northern tip of the peninsula. The hangar and landing field associated with the former airbase are located approximately 6 miles south of Metlakatla.

The lead-based paint (LBP) investigation was conducted beginning in September 1997 in the area comprising the Metlakatla Peninsula south of Yellow Hill Lake and including Yellow Hill. This area was historically used as a U.S. military base beginning in the 1940s and was later used as an airport for the Ketchikan area. The purposes of this report are to document the results of a survey of LBP materials and to provide a plan for mitigation of the LBP materials.

Section 2 of this report presents background information about the project site and describes the objectives of the work. Section 3 describes the methods used to conduct the investigation. Site-specific LBP results and mitigation plans are presented in Section 4. The procedures and cost estimates for the mitigation work are discussed in Section 5. Recommendations are presented in Section 6. Section 7 lists the references cited in this report. Many of the technical terms used in this report are defined in the glossary that appears as Appendix A. Terms defined in the glossary are shown in ***italics and boldface*** on their first use in this document.



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 1
		Location & Vicinity Map



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 2
		Historical Use of Peninsula

2.0 BACKGROUND AND OBJECTIVES

2.1 Background

Prior to conducting the LBP investigation, a preliminary assessment was conducted in 1996. The preliminary assessment consisted of evaluating the data generated from the records review, site reconnaissance, and interviews and compiling information related to the environmental conditions at the site. The records review focused on researching and analyzing readily available information concerning the project area and its surroundings in order to understand historical site uses and identify potential areas of concern. The site reconnaissance consisted of a physical inspection of the site to corroborate research information, confirm current conditions, and collect additional information to support the assessment. Interviews were conducted with persons knowledgeable of the site history and/or operations. Areas of environmental concern were located, inspected, and photographed.

Hazardous substances such as LBP are known to be associated with former Department of Defense (DOD) and Department of Transportation facilities on the Metlakatla Peninsula. The potential exists for release of these hazardous substances into the air and the surrounding environment of the Metlakatla Peninsula. LBP was used on the majority of the painted exteriors of DOD and Federal Aviation Administration (FAA) buildings and communication/navigation facilities. Sites suspected of having LBP components were inventoried during the preliminary assessment. The preliminary assessment recommended that an LBP survey be performed in order to plan appropriate mitigation.

Up until the time this work was performed, only limited investigations to assess the extent of the presence or absence of LBP on the peninsula had been conducted. Environmental investigations by the FAA had confirmed the presence of lead in soil at two FAA facilities: the Very High Frequency Omnidirectional Range Tactical Air Navigation (VORTAC) and the Non-Directional Beacon sites.

2.2 Objectives

The objectives of the LBP investigation were to:

1) Perform ***visual inspections*** of buildings and other structures to locate and assess the condition of LBP
2) Sample suspect LBP
3) Analyze suspect LBP through an independent laboratory
4) Develop an inventory of LBP at the site, including locations, material characteristics, condition, degree of damage, quantity, accessibility, and potential for disturbance

The LBP investigation included developing a field work plan; reviewing as-built drawings; assembling equipment and supplies; visual inspecting, sampling, and analyzing for LBP; ***air monitoring***; and making field measurements for quantification. The extent and nature of the LBP hazard was evaluated using "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing" (U.S. HUD, 1995) and 40 CFR Part 745 Subpart L, "Lead; Requirements for Lead-Based Paint Activities; Proposed Rule" (U.S. EPA, 1994) as general guidance. Lead-based paint is defined as any paint, varnish, shellac, or other coating that contains lead equal to or greater than 0.5 percent by weight (5,000 µg/g, 5,000 ppm, or 5,000 mg/kg) as measured by laboratory analysis. Representative samples were collected from various components of the structures and analyzed by an independent laboratory for lead content using flame atomic absorption spectrophotometry (FAAS).

The sites investigated included the LBP locations of concern as listed below and as referenced in the preliminary assessment (Ridolfi, 1996). An inventory of the major site structures and features was provided in Table 1 of the preliminary assessment. The site locations are shown on Figures 3, 4, and 5.

Site No.	Site Name (Comment)
7	BIA Road Maintenance Center
14	Chlorination Building
15	White Alice Station (Target Housing)
16	Antenna Towers
19	DOD/FAA Non-Directional Beacon (No Access)
20	Weather Bureau Housing (Target Housing)
21	FAA Remote Control Air Ground (No Access)
22	DOD AACS Station
24	FAA Middle Marker Facility
25	FAA Approach Lighting System
27	VORTAC (No Access)
29	Directional Finder Antenna
32	Short Approach Lighting/Runway Identification Light System (SALSAR)
35	Small Tower
36	FAA Glide Slope Facility
37	FAA Sand Shed/Asphalt Plant
42	FAA Tank Farm
46	USCG Fire Station/Post Exchange
48	Main Construction Camp (Building Remains)
49	DOD Gasoline Station
50	DOD/FAA Fire Truck Hut
53	FAA Housing Area (Target Housing)
54	Public School
56	Pacific Northern/Western Airlines (PNA/WA) Apartments (Target Housing)
63	DOD/FAA Remote Receiver Station
67	Weather Bureau Station
69	USCG Quarters
70	DOD Beacon Tower
72	Hangar Boiler Building
73	Boiler Building AST
74	USCG ASTs
75	Hangar
77	PNA/WA Terminal
78	DOD Air Traffic Control Tower
80	Localizer
82	Winnipeg Garrison/Annette Inn
85	Tropospheric Relay Station
86	Satellite Tracking Station

3.0 INSPECTING FOR LEAD-BASED PAINT

3.1 Assessing the Condition of LBP

The LBP investigation included identifying and observing the type and location of painted materials and surfaces; either sampling suspect materials or assuming they contained LBP; and documenting the location and quantity of the material. LBP in each location was described with respect to the type and extent of damage, the potential for disturbance, and the cause of damage.

The physical assessment involved evaluating the condition of the suspect material and the potential for its future disturbance. Lead-based paint materials were placed in one of the following five categories by condition and potential for disturbance:

1. Significantly damaged LBP
2. Damaged LBP
3. LBP in good condition with potential for significant damage
4. LBP in good condition with potential for damage
5. Any remaining LBP or suspected LBP with low potential for damage

The following criteria were used to classify the condition of suspect LBP:

Condition:	If one or more characteristic is present:	And distribution is:	
		Even	Localized
Significantly Damaged	Peeling, cracking, flaking, chipping, blistering over the surface	$\geq$ 10%	$\geq$ 25%
Damaged	Peeling, cracking, flaking, chipping, blistering over the surface	< 10%	< 25%
Good	No visible damage or deterioration or very limited damage or deterioration	---	---

3.2 General Field Procedures

3.2.1 Field Documentation

Field activities and procedures were documented with indelible waterproof black ink in permanently bound field ***logbooks*** made of waterproof paper. Information entered in the field logbooks included, but was not necessarily limited to, the following:

- Project name, location, and number
- Rationale for collecting the sample
- Date and time of sampling
- Unique sample number incorporating existing site number
- Media sampled
- Geographical location of sampling point
- Physical location of sampling point, e.g., wall, floor, perimeter, etc.

- Method of sampling, including procedures, equipment, and any departure from the sampling plan (including rationale for the departure)
- Results of field measurements
- Documentation of field instrument calibration and maintenance
- Sample preservation method
- Type and quantity of containers used for each sample
- Weather conditions at the time of sampling, e.g., temperature, approximate wind speed and direction, sky cover
- Photographic information (such as date and time, direction, roll number, frame number)
- Diagram drawn approximately to scale showing all suspected materials in the sampling area
- Name of person preparing the diagram and date prepared
- Analyses requested
- Shipping information, including airbill
- Name(s) of inspector and date of inspection
- Other pertinent information

3.2.2 Sample Collection and Identification

Samples were collected by individual site numbers (1 to 86) across the peninsula according to the guidance documents named in Section 2.2 (U.S. EPA, 1994; U.S. HUD, 1995). The contaminant of concern was noted by a letter designation (i.e. lead-based paint = L). Therefore, a sample number such as 63L-01 indicates the first sample (01) collected for LBP analysis (L) at site 63 (63).

The sampling occurred in two groups: 1) Target Housing and 2) remaining sites, including other structures, buildings, and features. Due to the nature and history of the facility, representative samples were taken of like groups or areas of homogeneous material. These samples were grouped by color, texture, facility, etc.

At Target Housing sites, soil samples, paint chip samples (where possible), and surface dust wipe samples were taken. Paint chip samples were taken from the outside surfaces of Target Housing areas. If possible, paint chip samples were taken so as not to damage existing surfaces. Wipe samples, which were collected only at Target Housing sites, were taken to assist in determining whether LBP is a problem in the housing areas.

At the remaining sites, paint chip samples and soil samples were collected. Paint chip samples were taken from outside and inside homogeneous surfaces of the remaining sites.

3.3 Sampling Procedures and Analytical Methods

3.3.1 Paint Chip Samples

Paint chip samples were collected in areas where paint was in poor condition and readily accessible. If there were many such similar areas, a few samples from representative areas were collected. For example, if all window wells were in poor condition, paint chips were collected from two to three window wells to verify the presence of LBP.

All component surfaces in every room of every structure showing visible, distinct painting histories were investigated for sampling and analysis, except those components that the inspector knew were replaced after 1980.

Paint chip samples were at least 250 mg in weight, 2 square inches in area, or about 1 teaspoon in volume. (These sizes are minimums; excess material was obtained where possible.) Paint chip samples were free of any ***substrate*** wherever possible.

LBP paint chip samples were collected in Whirl-Pak sterile bags (2-ounce capacity, 2.5 ***mil*** thick) and labeled. Each group of 20 individual Whirl-Pak bags was sealed in a Zip-Lock freezer bag.

The samples were submitted for lead analysis to laboratories with proper accreditation. Paint chip samples were analyzed for LBP using test methods specified in U.S. Environmental Protection Agency (EPA) Method 3060/7420. This analysis was performed by an ELLAP- or NLLAP-accredited laboratory.

3.2.2 Surface Dust Wipe Samples

Dust wipe samples were taken at Target Housing sites: site 15 (White Alice Station), site 20 (Weather Bureau Housing), site 53 (FAA Housing Area), and site 56 (PNA/WA Apartments). Dust wipes were collected by National Institute of Occupational Safety and Health (NIOSH) Method 9100 to determine surface contamination at landings and at the perimeter of rooms, where dust was more likely to be present. The following procedure was used to collect the dust wipe samples.

1. Don a clean pair of gloves.
2. Place the template over the area to be sampled and secure the outside edges with masking tape. If the area to be sampled is confined and a template cannot be used, measure the sampling area with the tape measure and delineate the area to be sampled with masking tape.
3. Remove a wipe from its package and unfold it.
4. Refold the wipe in fourths, and wipe the surface to be sampled with firm pressure. Use an overlapping "S" pattern to cover the entire surface area with horizontal strokes.
5. Fold the exposed side of the wipe in, and wipe the same area using vertical "S" strokes.
6. Fold the wipe once more to reveal an unexposed surface, and wipe the surface a third time as described in step 4.
7. Fold the wipe, exposed side in, and place it into a clean sample container, such as a Whirl-Pak sterile bag. Seal securely and clearly label the sample container.
8. Clean the template in preparation for the next wipe sample.
9. Discard gloves.
10. Collect field blanks to represent 5 percent of the total number of dust wipe samples, at least two per sample set. To collect the field blanks, remove unexposed wipes from their packaging and place into sample containers.

Surface dust wipe samples were collected in Whirl-Pak sterile bags (2-once capacity, 2.5 mil thick) and labeled. The wipe samples were then sealed in Zip-Lock freezer bags. The wipe samples were analyzed by NIOSH Method 7082, an FAAS method.

3.3.3 Air Samples

Samples for airborne LBP dust were collected using commercially available cassettes. Sample collection filters, which consist of mixed cellulose ester, are 37 mm in diameter, and have a 0.8μm pore size, were used. The sampling pump and flow indicator were calibrated over the range of their intended use with a recognized standard. A leak check of the sampling system was performed at each indoor and outdoor sampling site by activating the pump with the

closed sampling cassette in line. Leaks were eliminated before initiating the sampling operation. The sampling was conducted to the following specifications:

Sampler: Filter (0.8-µm cellulose ester membrane, 37 mm diameter)
Flow Rate: 1 to 4 liters/minute
Minimum Volume: 200 liters
Maximum Volume: 1,500 liters

Personal protection monitoring was conducted as follows:

1. Calibrate each personal sampling pump with a representative sampler in line.
2. Sample at an accurately known flow rate between 1 and 4 liters/minute for up to 8 hours, for a total sample size of 200 to 1,500 liters for time-weighted average (TWA) measurements. Do not exceed a filter loading of approximately 2 mg total dust.

Air monitoring samples were collected in pre-loaded cassettes with mixed cellulose ester filters. Cassettes were placed in Zip-Lock bags and labeled.

Samples were submitted to accredited laboratories for analysis by NIOSH Method 7082, an FAAS method.

3.3.4 Soil Samples

Two composite soil samples were taken at the individual sites:

1. A composite soil sample consisting of at least four subsamples (one from each side of the building) was taken next to the foundation or at the dripline of the building/site that was being examined.

2. A composite soil sample consisting of at least four subsamples (one from each side of the building) was taken at the same time, at a distance of 15 to 25 feet from the building or site perimeter.

Soil samples were collected in Zip-Lock plastic freezer bags. Sample container labels contained the following information:

- Project name
- Sample identification number
- Date and time of sampling
- Name of sampling personnel
- Type of sample
- Analyses to be performed

Immediately upon collection, all filled soil sample bags were placed in larger Zip-Lock freezer bags and grouped together by site numbers in groups of 20. During the sampling event, the bagged samples remained in the custody of the samplers at all times. Upon completion of sampling, the bagged samples were taken directly to the laboratory.

The analysis of soil samples for LBP was performed using test methods specified in EPA Method 3060/7420 by an ELLAP- or NLLAP-accredited laboratory.

3.4 Quality Assurance Considerations

3.4.1 Chain-of-Custody Procedures

The primary purpose of chain-of-custody procedures is to document possession of the samples from collection through storage and analysis to reporting. Chain-of-custody forms become part of the permanent record of sample handling and shipment. Field sampling personnel were responsible for the care and security of the samples from the time of their collection until they were turned over to the shipping agent or laboratory. A sample was considered to be in one's custody if it was in plain view at all times, in the physical possession of the sampler, or stored in a locked place where tampering was prevented.

Each chain-of-custody form contained the following information:

- Sample identification numbers
- Date and time of sampling
- Type of sample and number of containers associated with each sampling point
- Preservatives used
- Analytes requested
- Shipping airbill number
- Transfer of custody acknowledgment

Samples were sealed in Whirl-Pak containers and grouped along with the identifying chain-of-custody form in large Zip-Lock bags in groups of 20. Quality assurance (QA) samples were collected along with regular samples at the rate of one in 20, or 5 percent, and noted in the field logbooks. Air samples taken in individual cassettes were individually sealed in small Zip-Lock bags, then grouped together in a larger Zip-Lock bag along with the identifying chain-of-custody form.

3.4.2 Paint Chip Samples

A QA sample (field duplicate) was taken immediately adjacent to every twentieth sample collected. Thus the twentieth and twenty-first samples of every group of 20 are side-by-side samples. QA samples were sent together with all the samples to a single laboratory for analysis. Each sample was labeled independently so that the identity of QA samples could not be determined except by reference to records kept by the inspector.

Duplicate samples should not disagree on the presence or absence of lead (5 percent or less or more than 5 percent lead). Discrepancies may occur as a result of sample contamination, inconsistent procedures, differences in technique, or mistakes (e.g., mislabeling of samples). Ordinarily, the difference between a QA sample and its corresponding regular sample should not exceed 10 percent. If there is large-scale variability, then suspect areas may be resampled and reanalyzed, if necessary.

3.4.3 Air Samples

Field blanks were taken by removing the cap for not more than 30 seconds and replacing it at the time of sampling before sampling was initiated. Field blanks were collected at the following places:

1. Near the entrance to each sampling area
2. At one of the ambient sites; field blanks were not left open during the sampling period

A sealed blank (trip blank) was carried with each sample set. This representative cassette was not opened in the field.

3.4.4 Equipment Decontamination

To minimize the potential for cross contamination of samples, equipment used during sampling was decontaminated prior to use at each sampling site.

For the paint chip sampling equipment, the tools were cleaned with prepackaged decontamination wipes between sampling events. Used wipes were collected in plastic bags for off-site disposal.

Personnel in contact with soil samples wore nitrile gloves. Prior to sample handling, new gloves were donned or existing gloves were thoroughly washed. Disposal of sediment/soil and decontamination water was documented in the field logbook. The sampling equipment (bowls, spoons, spatulas) was decontaminated between composite samples. The decontamination procedure was as follows:

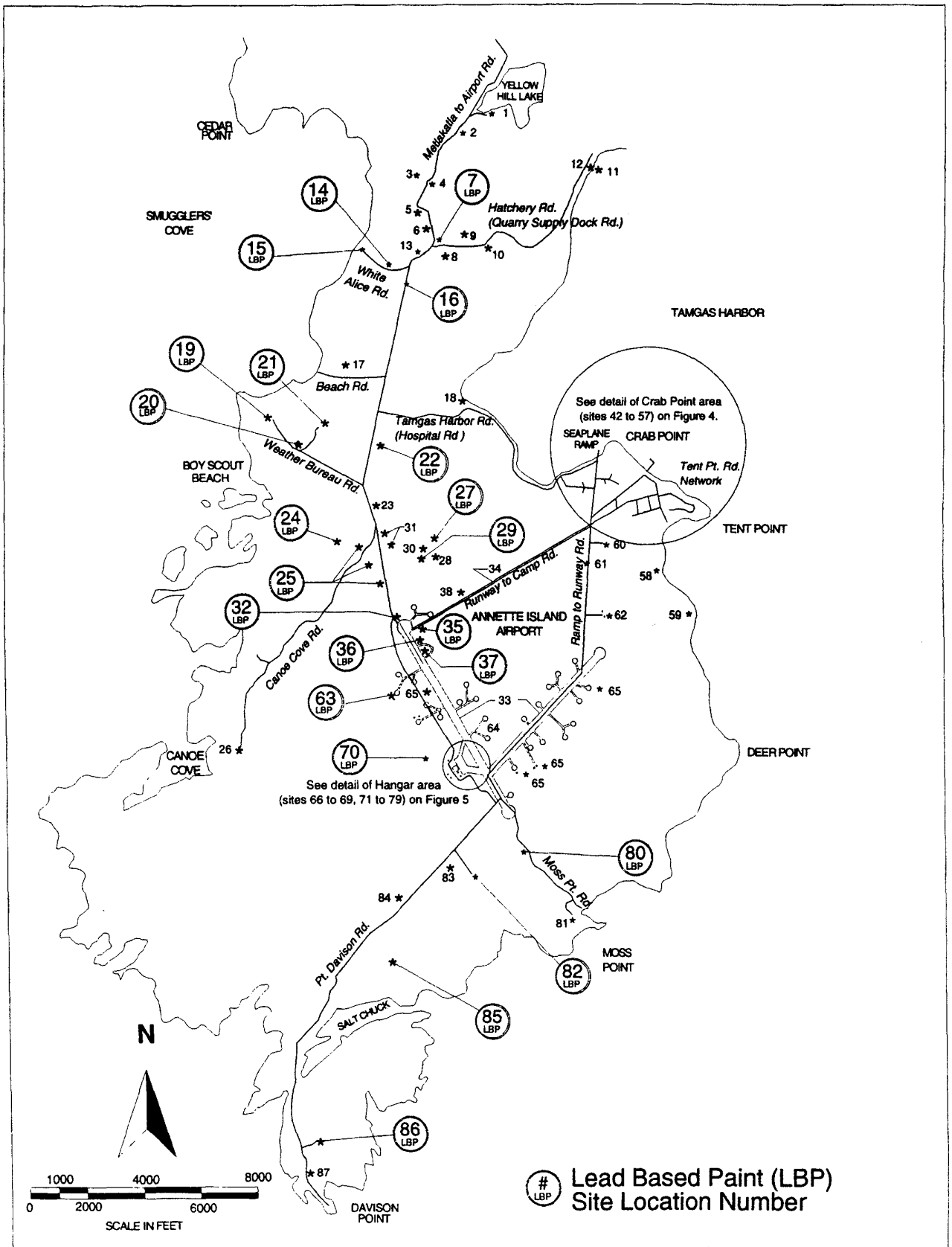
1. Rinse and brush with potable water to remove material clinging to tools
2. Wash with brush and Liquinox (non-phosphate) soap and potable water
3. Rinse with potable water
4. Final rinse with potable water
5. Air dry
6. Wrap in aluminum foil

The rinse waters and the Liquinox water were applied from plastic bottles or spray bottles to minimize the volume of decontamination water.

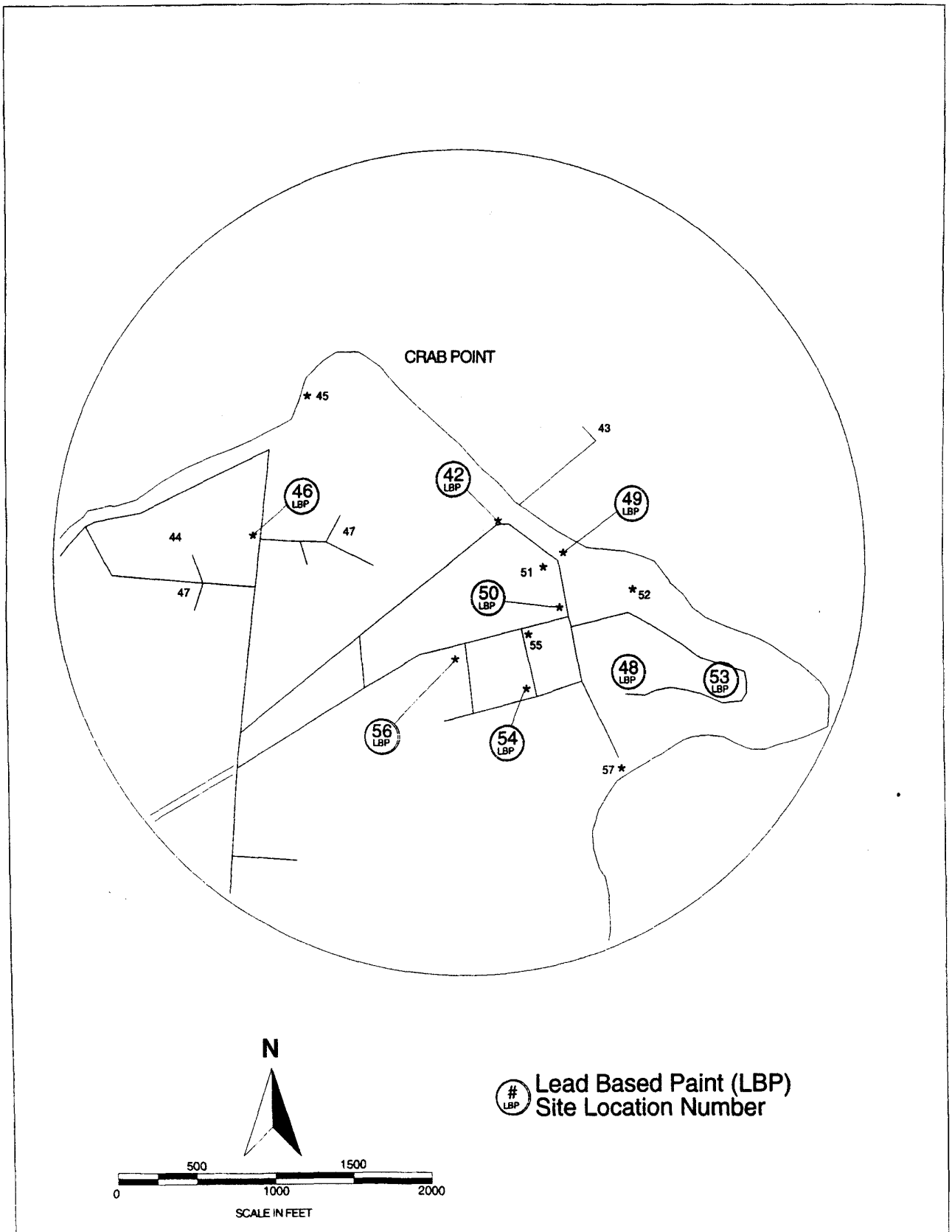
Wipe samples were collected by NIOSH Method 9100.

3.5 Data Reduction

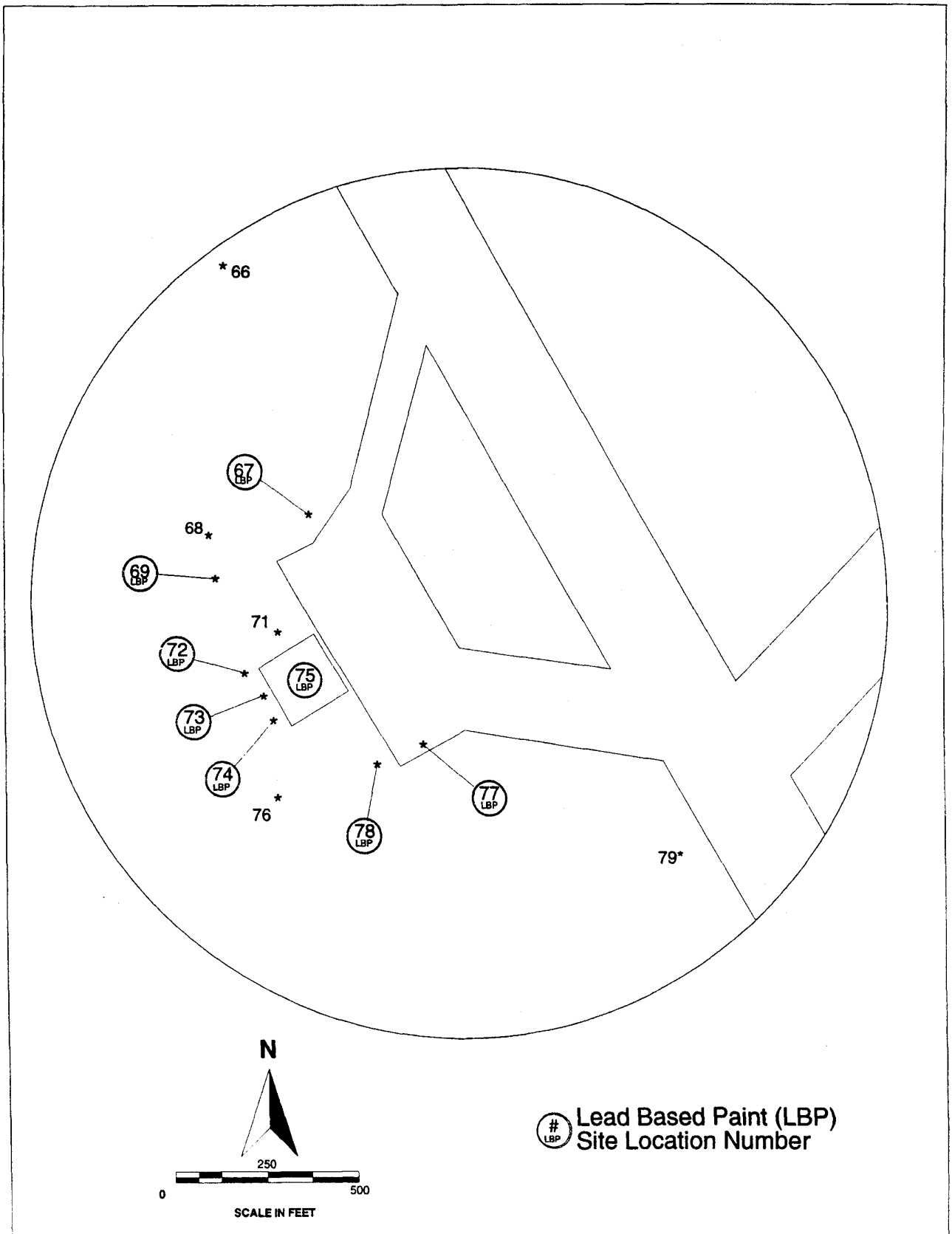
The analytical data were checked by the laboratory for accuracy, precision, and completeness. After receipt of the data packages, Ridolfi Engineers Inc., conducted a limited independent data review. Data from the QA samples were compared to corresponding sample data obtained from the site.



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 3
		LBP Inventory Sites



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 4
		Crab Point Inventory Sites



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 5
		Hangar Area Inventory Sites

4.0 SITE-SPECIFIC RESULTS AND PLANS

Information obtained during the LBP investigation has been summarized in this section for each site. The following information is provided:

- Description of the site, including historical and current uses
- Suspect materials sampled or assumed to be LBP
- Description of LBP-containing materials and quantities
- Recommendations

LBP abatement is regulated and must comply with Occupational Safety and Health Administration (OSHA) Standard 1926.62, Subpart D. Refer to Appendix D of this report for an overview of LBP abatement methods and the worker protection requirements associated with each method.

The following is a brief list of LBP abatement methods:

- Abrasive blasting
- Chemical stripping
- Power tool cleaning with vacuum collection system
- *Encapsulation*
- Removal and replacement
- Enclosure

Not all of the above methods are recommended as actions in this investigation.

4.1 Site 7 BIA Road Maintenance Center

Description

The operational road maintenance center contains approximately 12 buildings housing offices and road maintenance equipment in a 300-foot x 350-foot work area (see photograph 7). The site includes metal huts, trailers, and wood structures.

Suspect Materials

Six paint chip samples were collected of six different materials. Samples included exterior paints, trim paint, and bolt sealer. Two composite soil samples were also taken. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 7-1 for sample locations.

Lead-Based Paint Materials

- White exterior paint contains 190,000 parts per million (PPM) lead
- Bolt sealer contains 10,000 PPM lead
- Green exterior undercoating contains 120,000 PPM lead
- Soil between buildings had 330 PPM lead

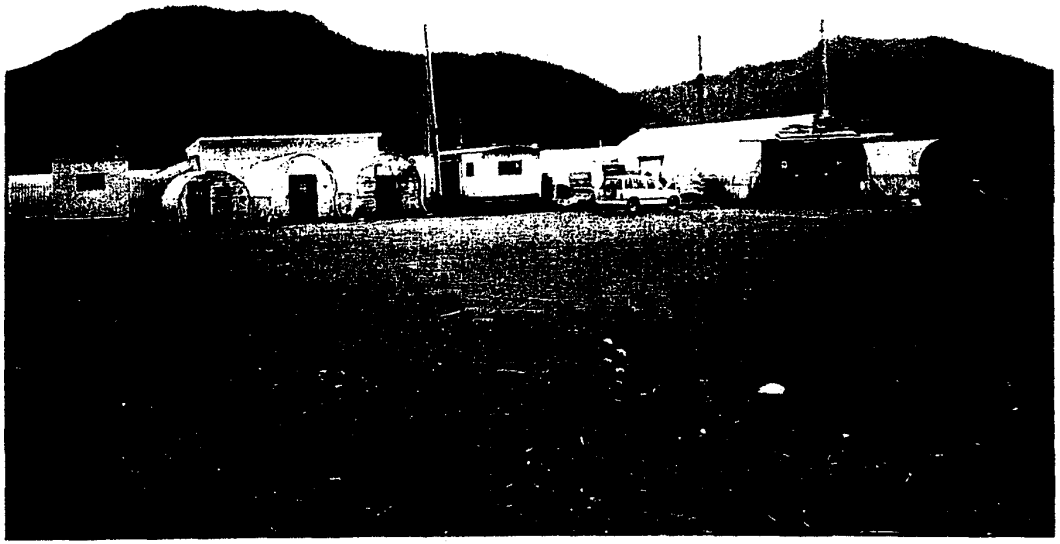
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
7L-1	Exterior	White exterior paint	10,700	SF
7L-2	Exterior	Bolt sealer	500	SF
7L-4	Exterior	Green exterior undercoating	2,000	SF

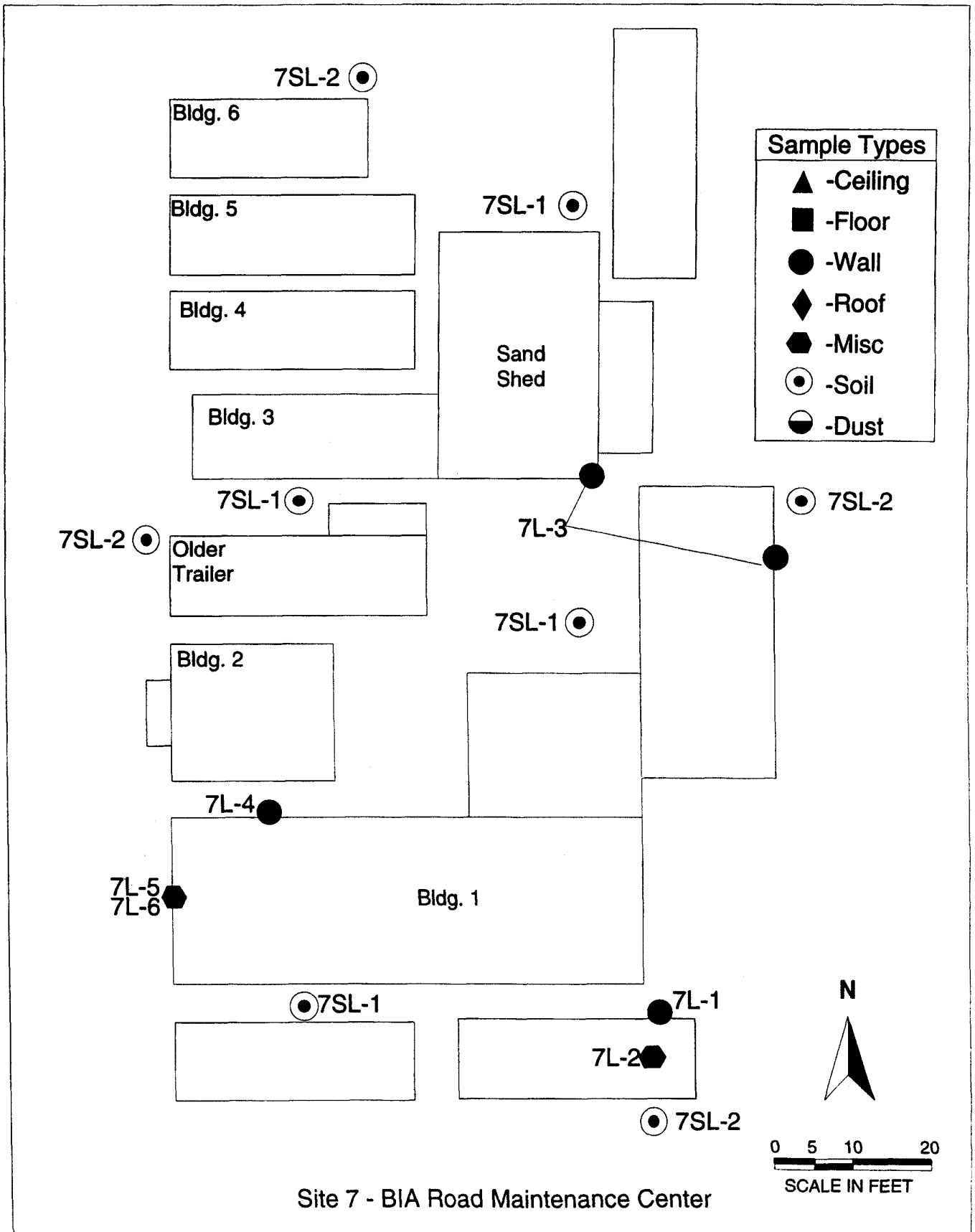
SF = square foot

Recommendations

We recommend that the paint be ***wet-scraped*** and encapsulated (see Figure 7-2). Perform confirmation sampling of soil after abatement to ensure that lead concentrations in soil are below the cleanup level.

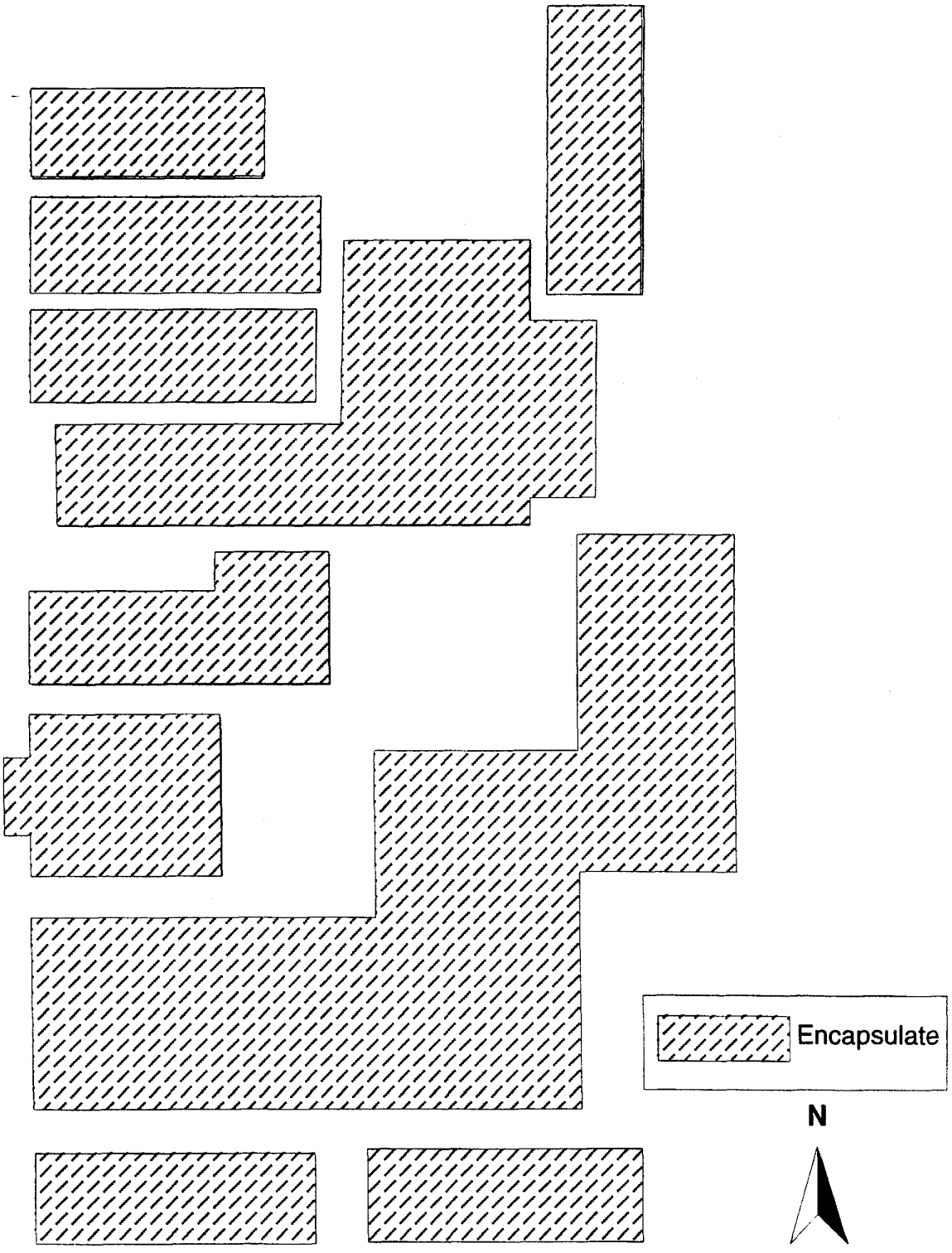


Photograph 7: BIA Maintenance Center



Site 7 - BIA Road Maintenance Center

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 7-1
		LBP Sample Locations



Recommendations:
Wet scrape exteriors and encapsulate.

Site 7 - BIA Road Maintenance Center

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 7-2 LBP Abatement Plan

4.2 Site 14 Chlorination Building

Description

The chlorination building is a 10-foot x 20-foot wood-frame structure within a fenced enclosure (see photograph 14). The building was constructed in the late 1960s as part of the steel water pipeline system that was built by the FAA to replace the DOD water pipeline that served the lower Metlakatla Peninsula. The building contains two water tanks and three types of water lines. The interior is drywall with a concrete floor. The building, fire door, and tanks have been damaged by bullet holes.

Suspect Materials

Four paint chip samples were collected. Materials included interior and exterior paint, water line paint, and tank paint. Two composite soil samples were also taken. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 14-1 for sample locations.

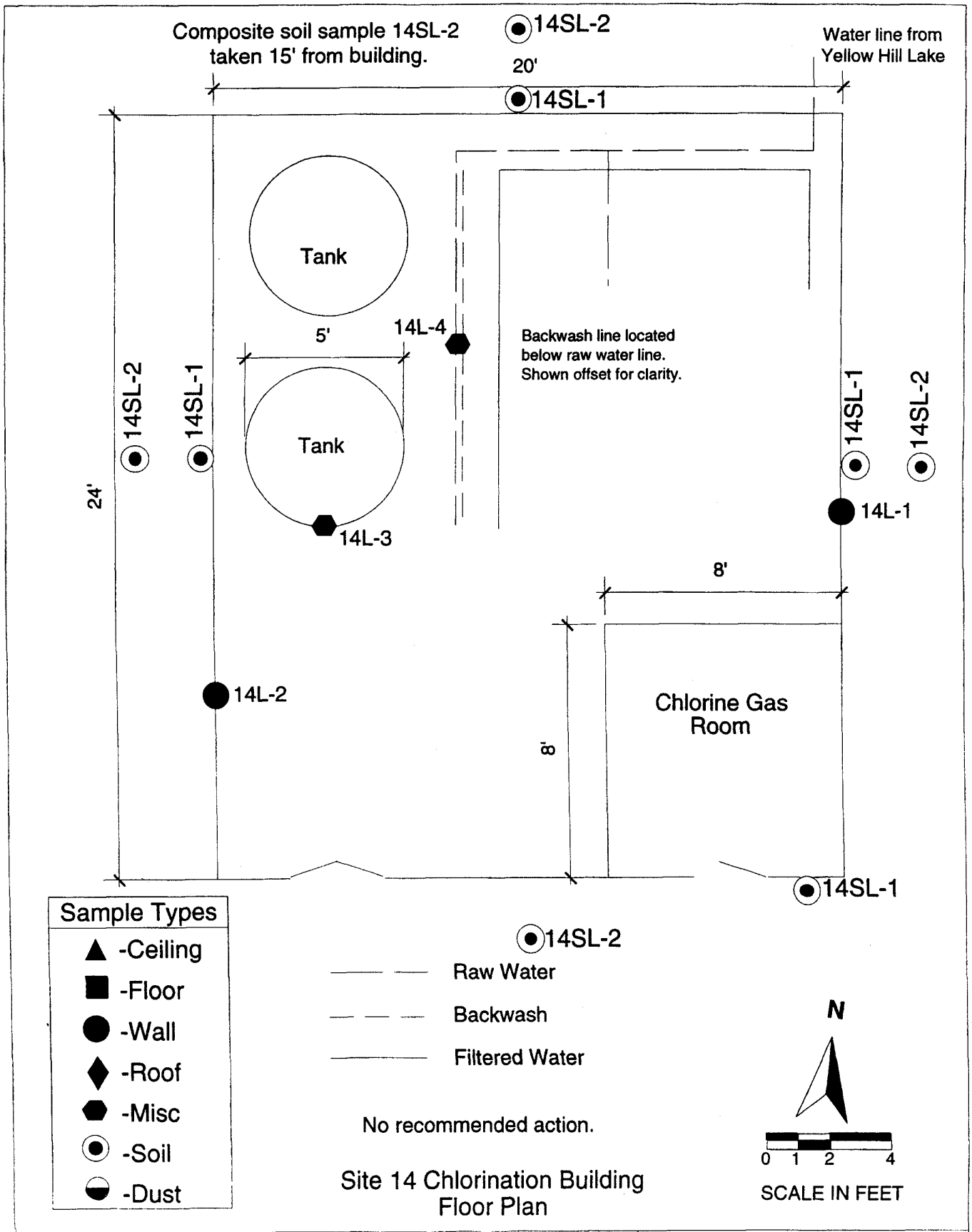
Lead-Based Paint Materials

Lead-based paint was found in the blue painted surfaces of the tanks and pipelines.

Recommendations

Blue painted surfaces are stable and in good condition. No action is recommended.

Photograph 14: Chlorination Building



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INVESTIGATION

Figure 14-1

LBP Sample Locations

4.3 Site 15 White Alice Station

Description

The former White Alice Station consisted of a 42-foot x 316-foot two-story building (see photograph 15), a microwave tower, and two large metal tropospheric relay antennas. It was constructed by the U.S. Air Force in the late 1950s. The building is currently used as offices for Metlakatla Power and Light (MPL). The building is divided into two sections by a concrete firewall. The southern 42-foot x 100-foot section is living quarters; the first floor of the southern section has been converted to living quarters for the MPL manager. The second floor contains the former Air Force quarters and receives limited use.

Suspect Materials

Eighteen paint chip samples were collected. Eleven were taken in the MPL area and six in the living quarters. One exterior paint chip sample was also taken. Four dust wipe samples were taken, two in the MPL office area and two in the first floor living quarters. Two soil samples were also collected. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figures 15-1, 15-2, and 15-3 for sample locations.

Lead-Based Paint Materials

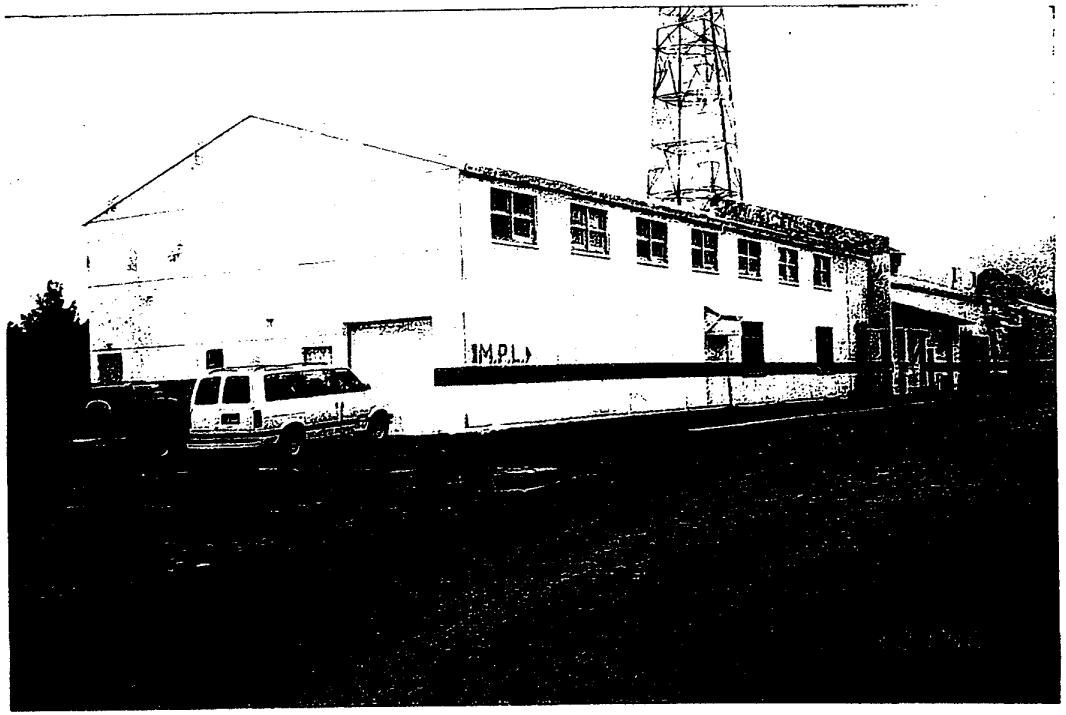
- Ceiling paint throughout the facility contains 270,000 PPM lead
- Lower gray wall paint in machine shop contains 6,800 PPM lead
- Pipe wrap insulation paint contains 21,000 PPM lead
- Dust wipe sample from west wall storage area contains 520 $\mu g/ft^2$ lead
- Dripline soil sample contains 580 PPM lead

Summary of LBP Quantities

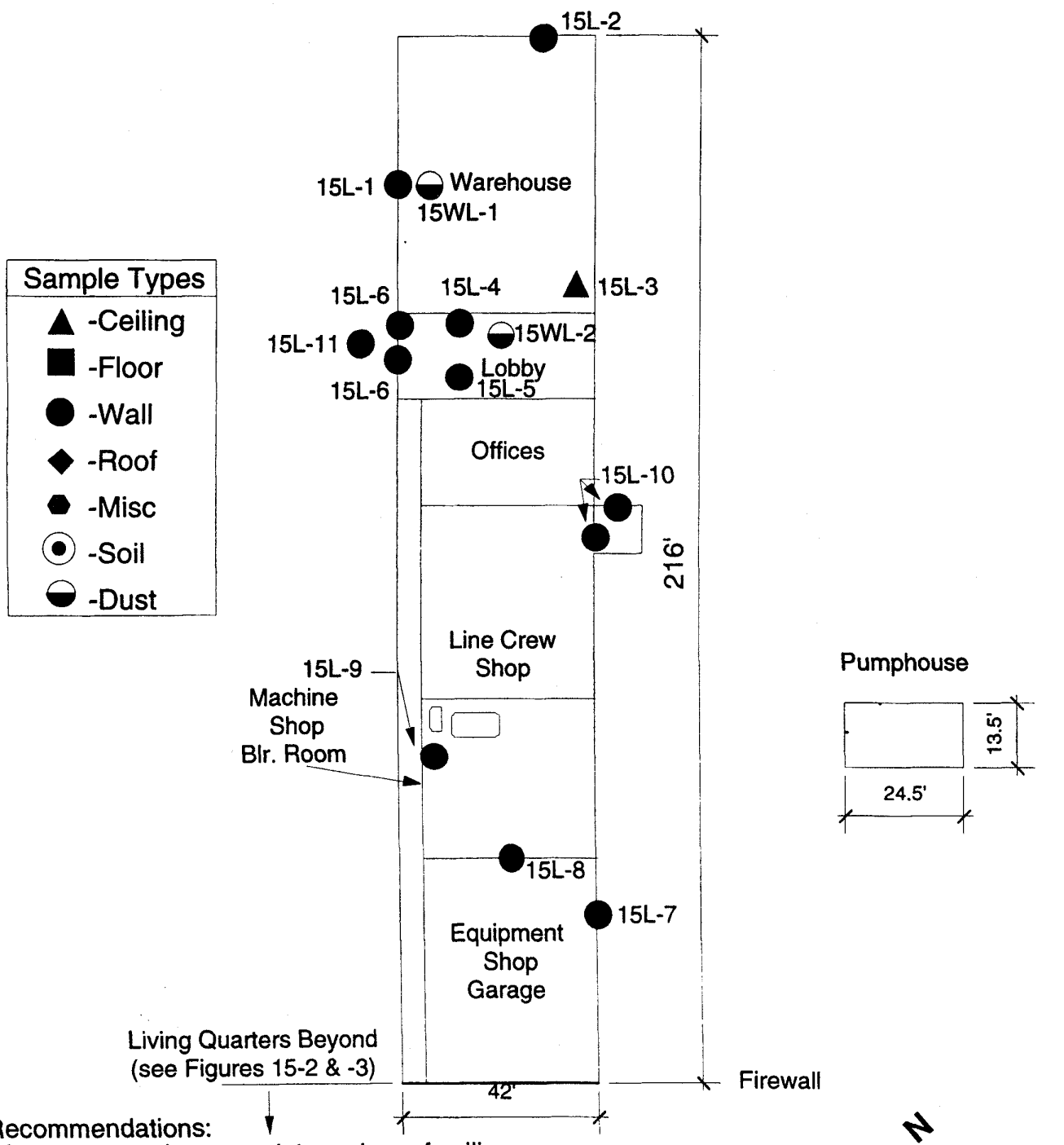
Sample No.	Location	Material Description	Quantity	Unit
15L-3	Facility	Ceiling paint throughout the facility	14,220	SF
15L-8	Machine	Lower gray wall in machine shop	576	SF
15L-18	Office	Pipe wrap insulation paint	3,090	LF

Recommendations

Wet-scrape and encapsulate the lower gray wall paint in the machine shop and the building ceiling. Encapsulate pipelines. Care must be taken, as pipe elbows are insulated with asbestos-containing material (ACM). Vacuum facility with high-efficiency particulate air (HEPA) vacuum to remove dust. Remove contaminated soil around building to a depth of 1 foot, to a distance of 15 feet from the building. Replace the soil and hydroseed the area.



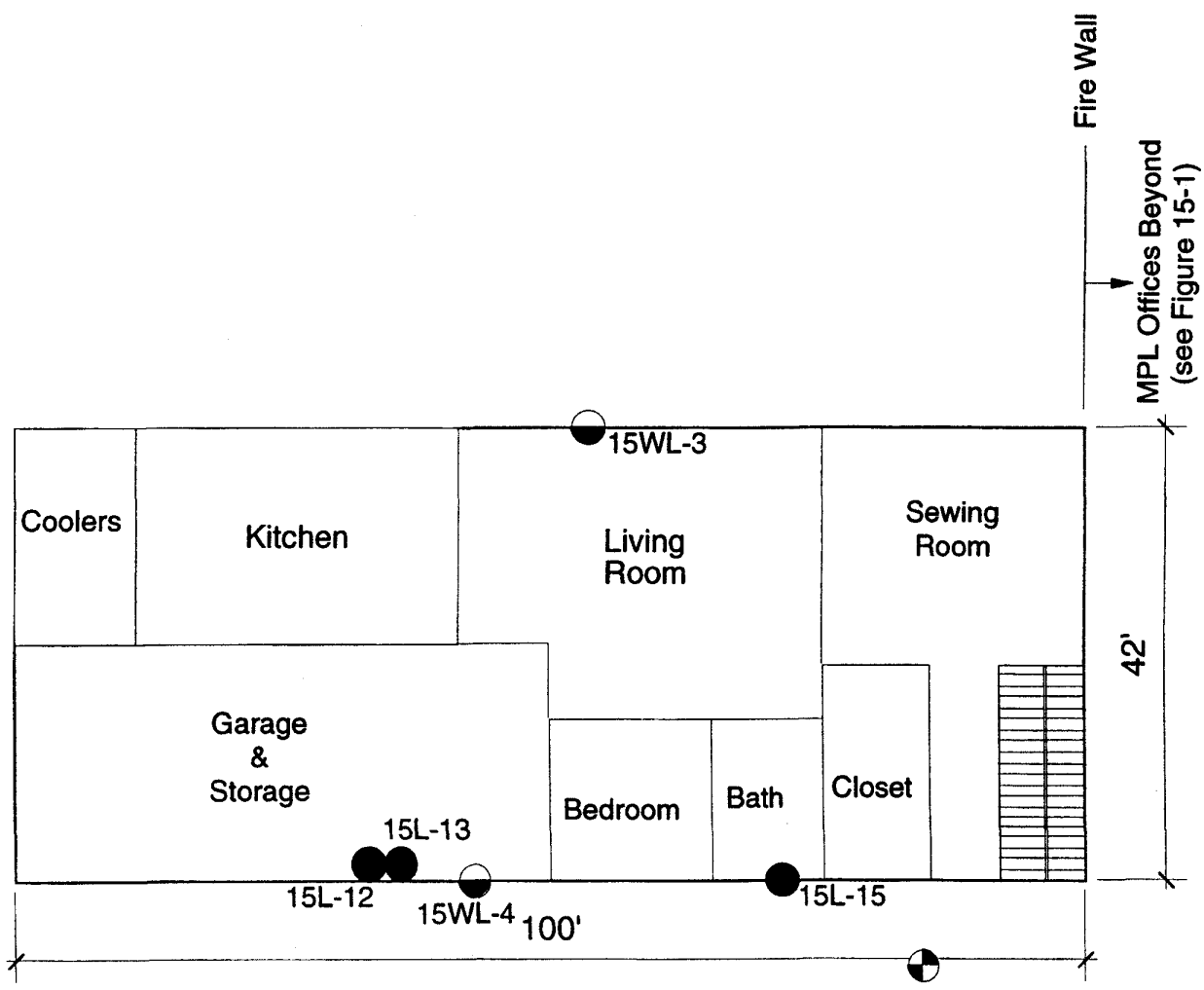
Photograph 15: White Alice Station



Recommendations:
Wet scrape and encapsulate main roof ceiling and gray walls in machine shop.
Encapsulate pipes through out facility.
HEPA vacuum facility.
Remove soil to a depth of 1', 15' out from perimeter.
Replace excavated soil and hydroseed.

Site 15 White Alice Station
MPL Offices

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 15-1
		LBP Sample Locations



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
◉ -Soil
◒ -Dust

Recommendations:
Wet scrape and encapsulate main roof ceiling.
Encapsulate pipes through out facility.
HEPA vacuum facility.
Remove soil to a depth of 1', 15' out from perimeter.
Replace excavated soil and hydroseed.

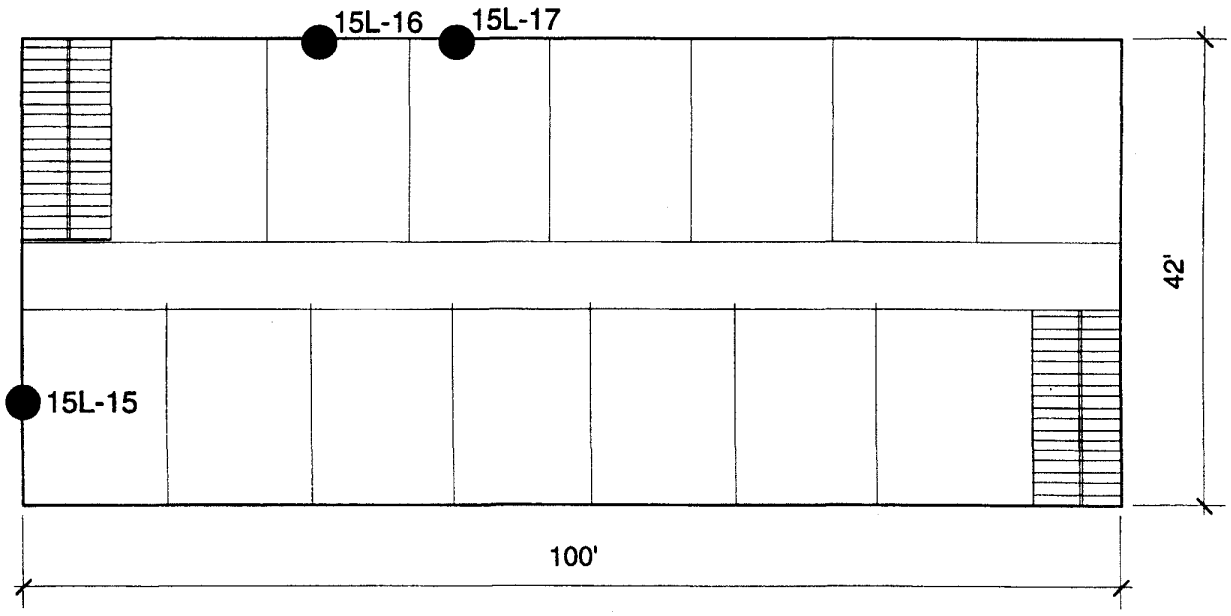
N

0 5 10 20

SCALE IN FEET

Site 15 White Alice Station
Living Quarters
First Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 15-2
		LBP Sample Locations



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
◉ -Soil
◒ -Dust

Recommendations:
Wet scrape and encapsulate main roof ceiling.
Encapsulate pipes through out facility.
HEPA vacuum facility.
Remove soil to a depth of 1', 15' out from perimeter.
Replace excavated soil and hydroseed.

N

0 5 10 20

SCALE IN FEET

Site 15 White Alice Station
Living Quarters
Second Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 15-3 LBP Sample Locations

4.4 Site 16 Antenna Towers

Description

The remains in the antenna tower area consist of segments of three large, faded red-and-white towers, all of which have toppled to the ground (see photograph 16) and a small wood-frame shed. The U.S. Geological Survey (USGS) Ketchikan Quadrangle 7.5' Topographic Map (1955) illustrates the historic locations of these three towers.

Suspect Materials

Two paint samples were collected at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 16-1 for sample locations.

Lead-Based Paint Materials

- Faded red tower paint contains 380,000 PPM lead
- White tower paint contains 870,000 PPM lead

Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity*	Unit
16L-1	Tower	Faded red tower paint	500	SF
16L-2	Tower	White tower paint	500	SF

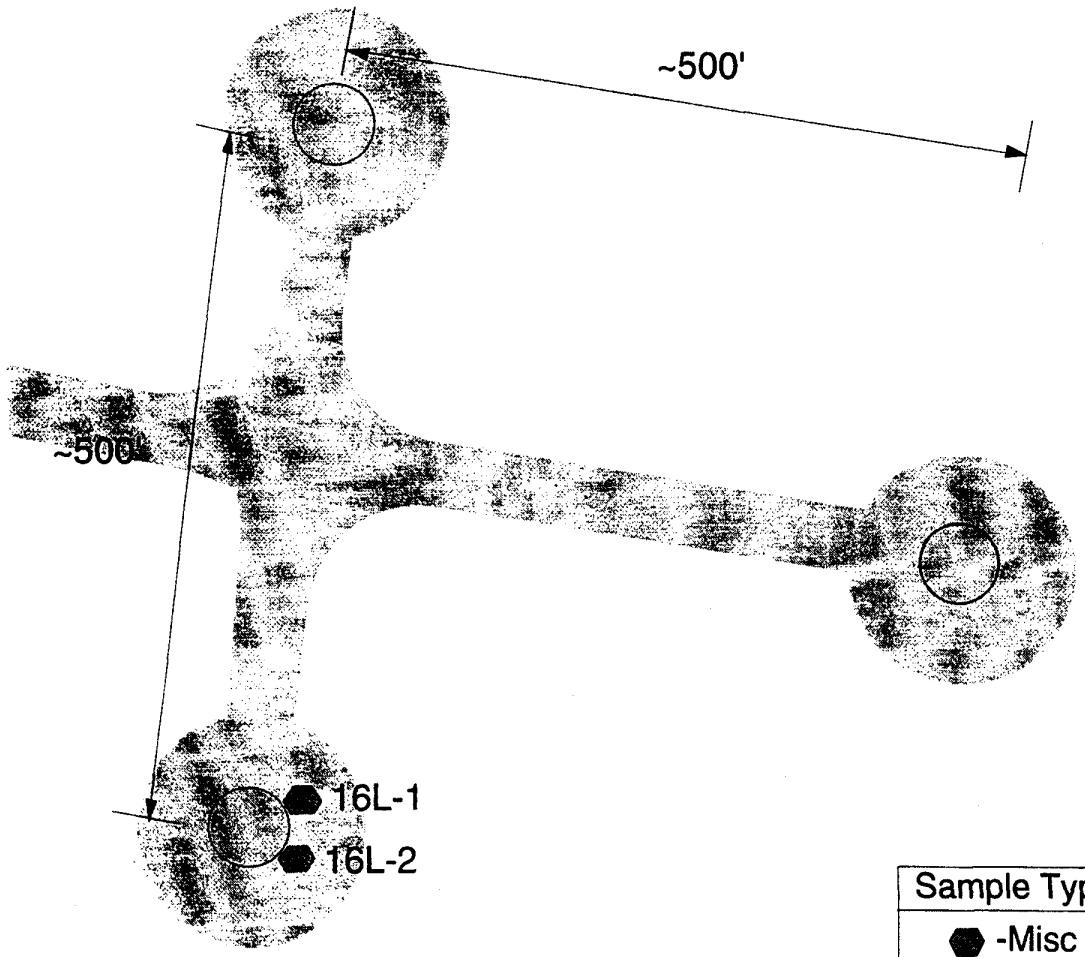
* per tower

Recommendations

Remove and dispose of towers. Stockpile metal for salvage. Perform confirmation sampling of soil in the surrounding area during tower removal to ensure that soil remaining after the remedial action is below the cleanup level for lead.

Photograph 16: Antenna Towers

Recommendation:
Remove and Salvage metal towers scattered around site.



Towers are no longer standing.
Towers have toppled to the ground and are scattered around site.

Original Tower Locations

Site 16 Antenna Towers

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 16-1 LBP Sample Locations

4.5 Site 19 DOD/FAA Non-Directional Beacon

Description

The non-directional beacon consists of one large, faded red-and-white tower in a fenced enclosure, approximately 120 feet high, and one small building (see photograph 19). The remains of four additional 100-foot faded red towers, all toppled to the ground, are located in a square configuration (300- to 400-foot sides) around the existing tower.

A beacon is shown at this site on DOD plans. Metlakatla Indian Community (MIC) members indicated a beacon was established by the Civil Aeronautics Administration (CAA) on this site prior to the construction of the airbase. The building and enclosed area were not accessible to the investigation personnel.

Suspect Materials

It is assumed that the paint on the fallen towers is LBP. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information.

Lead-Based Paint Materials

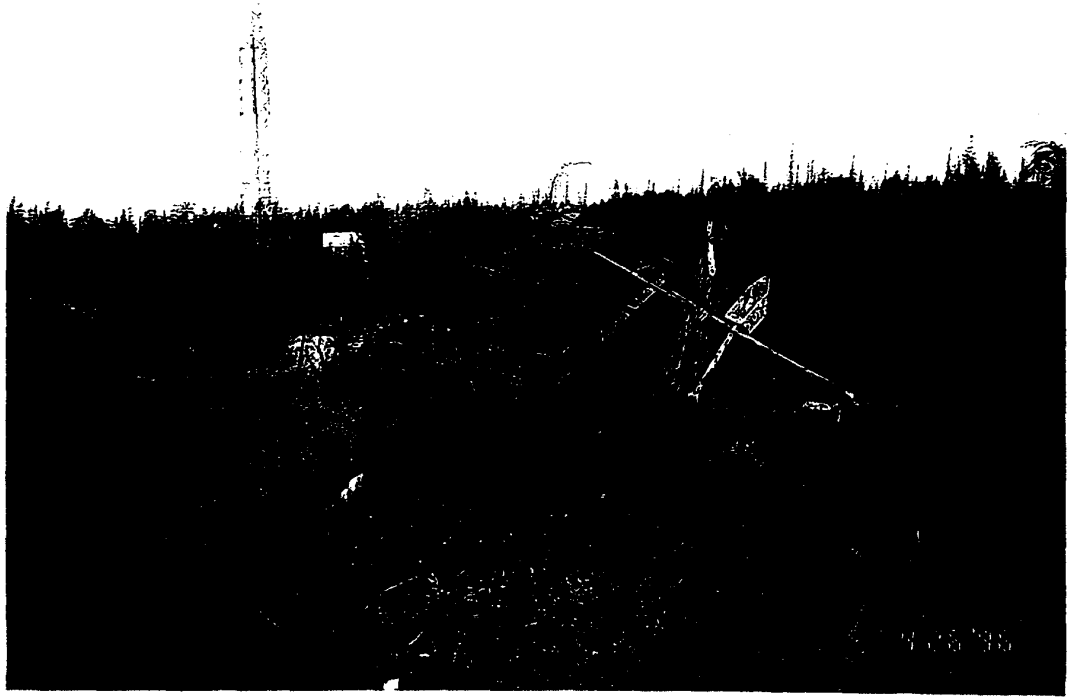
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity*	Unit
NA	Tower	Faded red & white tower paint	500 est.	SF

* per tower
NA = not applicable

Recommendations

Remove and dispose of fallen towers. Stockpile metal for salvage. Perform confirmation sampling of soil in the surrounding area during tower removal to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 19: Non-Directional Beacon

4.6 Site 20 Weather Bureau Housing

Description

The weather bureau housing consists of seven two-story, wood-frame structures (six residences and one maintenance building) (see photograph 20) constructed in the late 1940s. The buildings have metal roofs and fiberglass insulation. All but two of the houses are occupied full time. One building (B-3) has been condemned for structural reasons; another building (B-6) is used as transient employee housing. An interview with Weather Bureau personnel established that the buildings are all of similar construction and materials. To limit damage to occupied units, suspect LBP samples were taken from the condemned unit.

Suspect Materials

Four paint chip samples were taken. The exteriors of both the condemned unit and the transient quarters were sampled. An interior paint sample was taken in the transient quarters, as were two dust wipe samples. Two soil composites were collected around the transient quarters. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 20-1 for sample locations.

Lead-Based Paint Materials

- Exterior paint of B-3 contains 5,700 PPM lead
- Exterior trim paint of B-3 contains 150,000 PPM lead
- Dripline soil sample at B-6 contains 490 PPM lead

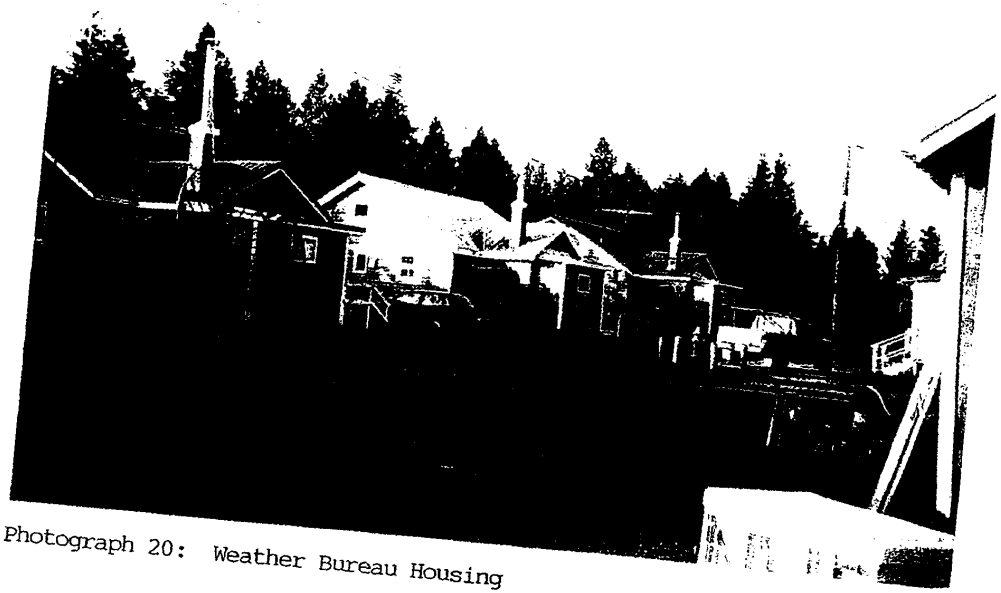
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity*	Unit
20L-1	Exterior	Exterior paint of B-3	1,600	SF
20L-4	Exterior	Exterior trim paint of B-3	200	SF

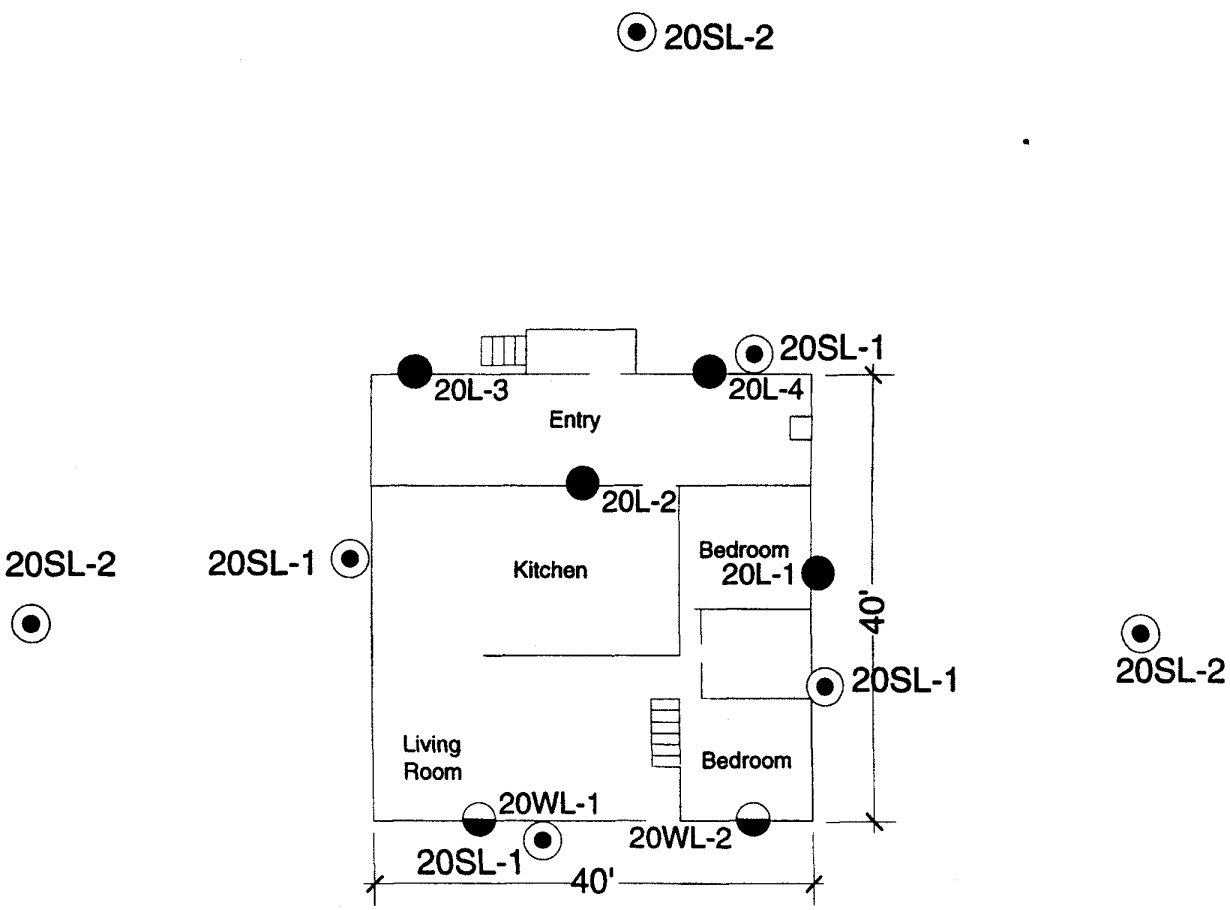
* per building unit

Recommendations

Remove contaminated soil around all units (see Figure 20-2). Remove soil to depth of 1 foot, to a distance of 15 feet from building. Stockpile excavated soil in designated central location. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead. Replace with clean soil and hydroseed. Demolish and dispose of condemned unit after ***asbestos abatement.***



Photograph 20: Weather Bureau Housing



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
⊙ -Soil
◒ -Dust

20SL-2

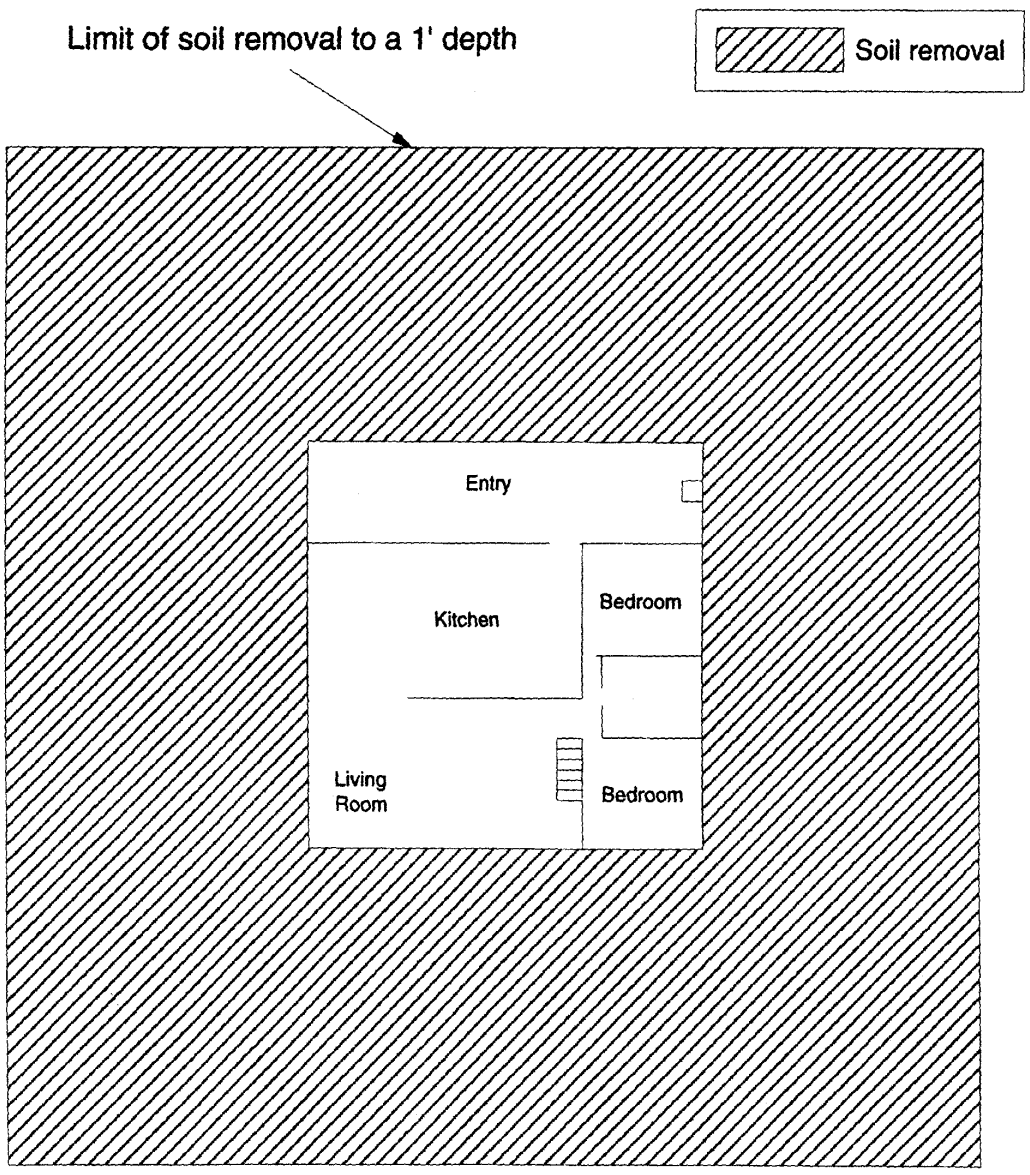
N

0 5 10

SCALE IN FEET

Site 20 - Weather Bureau Housing
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 20-1 LBP Sample Locations



Recommendations:
Demolish condemned unit.
Remove soil to a depth of 1', 15' out from perimeter.
Replace excavated soil and hydroseed.

N

0 5 10
SCALE IN FEET

Site 20 - Weather Bureau Housing
Floor Plan

METLAKATLA PENINSULA
LEAD BASED PAINT

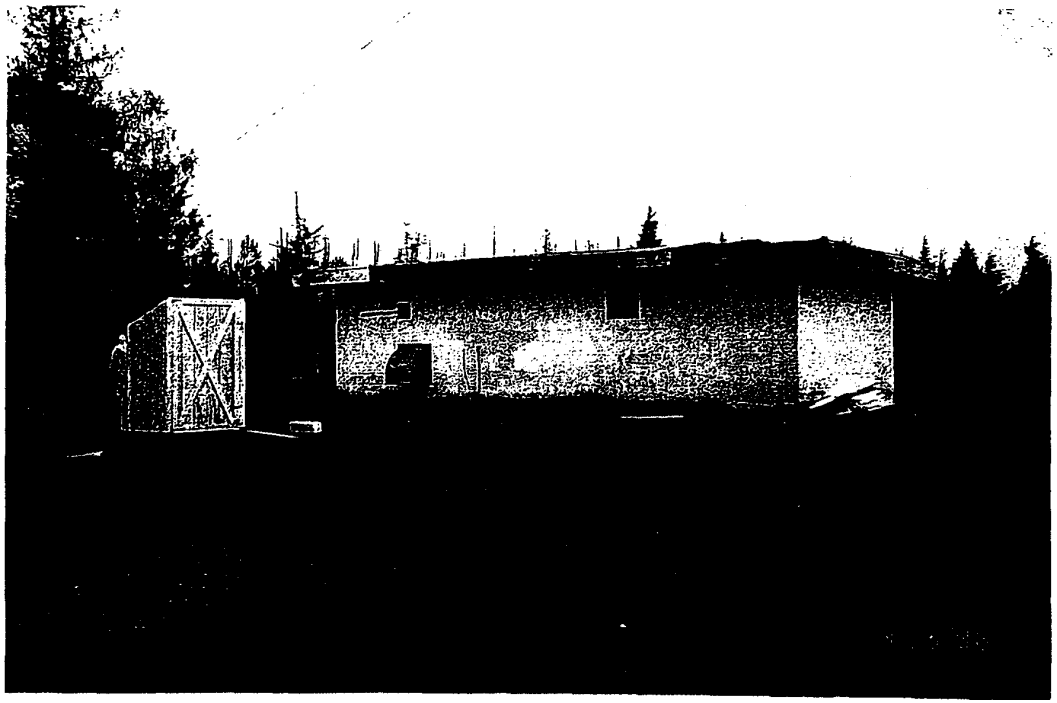
Figure 20-2

LBP Abatement Plan

4.7 Site 21 FAA Remote Control Air Ground

Description

The remote control air ground facility has recently been decommissioned (see photograph 21), and the FAA's lease has been terminated. However, the U.S. Coast Guard (USCG) has recently leased acreage at the former FAA facility and established a Global Positioning System (GPS) ground station using the FAA's existing building and three new towers. The facility was not accessible to the inventory personnel.



Photograph 21: Remote Control Air Ground

4.8 Site 22 DOD AACS Station

Description

The remains of the DOD AACS station consist of a 20-foot x 60-foot wood floor on pilings, a 30-foot faded red-and-white tower (see photograph 22), concrete foundations, concrete pits, and felled wood pole antennas. Abandoned electrical equipment is in the crawl space below the wood floor foundation, and remnants of vinyl tiles are on the wood floor.

Suspect Materials

Seven paint chip samples were collected. Due to the condition of the site, building samples were collected from the debris piles. The tower is standing, so samples were collected from intact paint. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 22-1 for sample locations.

Lead-Based Paint Materials

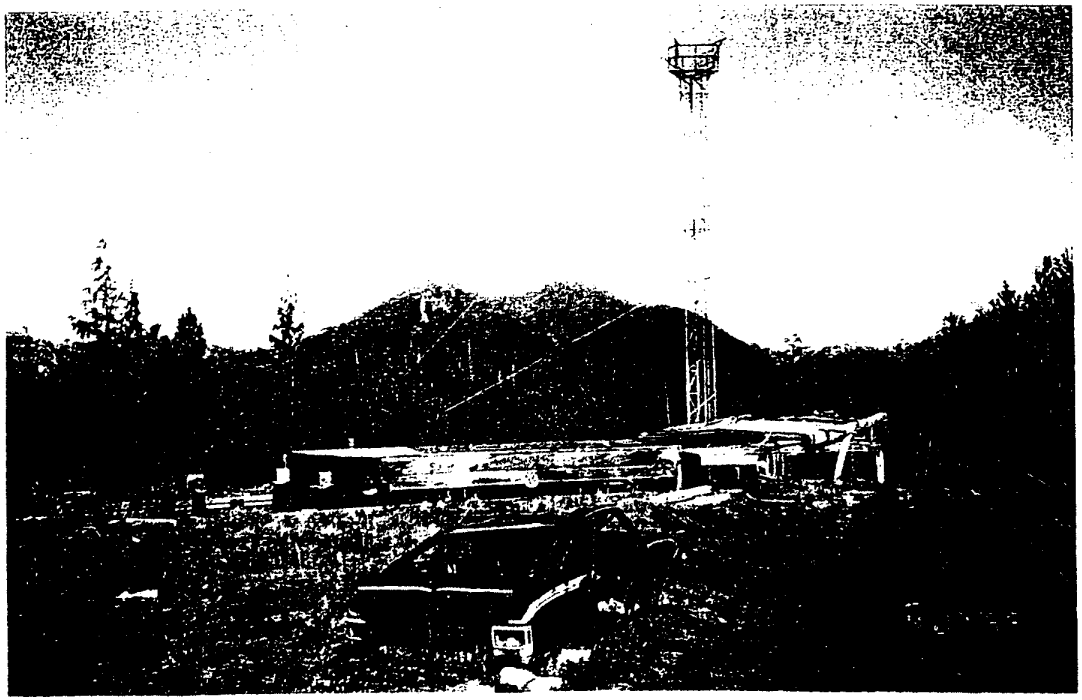
- Exterior white paint contains 210,000 PPM lead
- Faded red roof paint contains 410,000 PPM lead
- Green/blue trim contains 7,000 PPM lead
- Faded red rail paint contains 420,000 PPM lead
- White paint on conduit contains 17,000 PPM lead
- White tower paint contains 83,000 PPM lead
- Faded red tower paint contains 370,000 PPM lead
- Perimeter soil sample contains 480 PPM lead

Summary of LBP Quantities

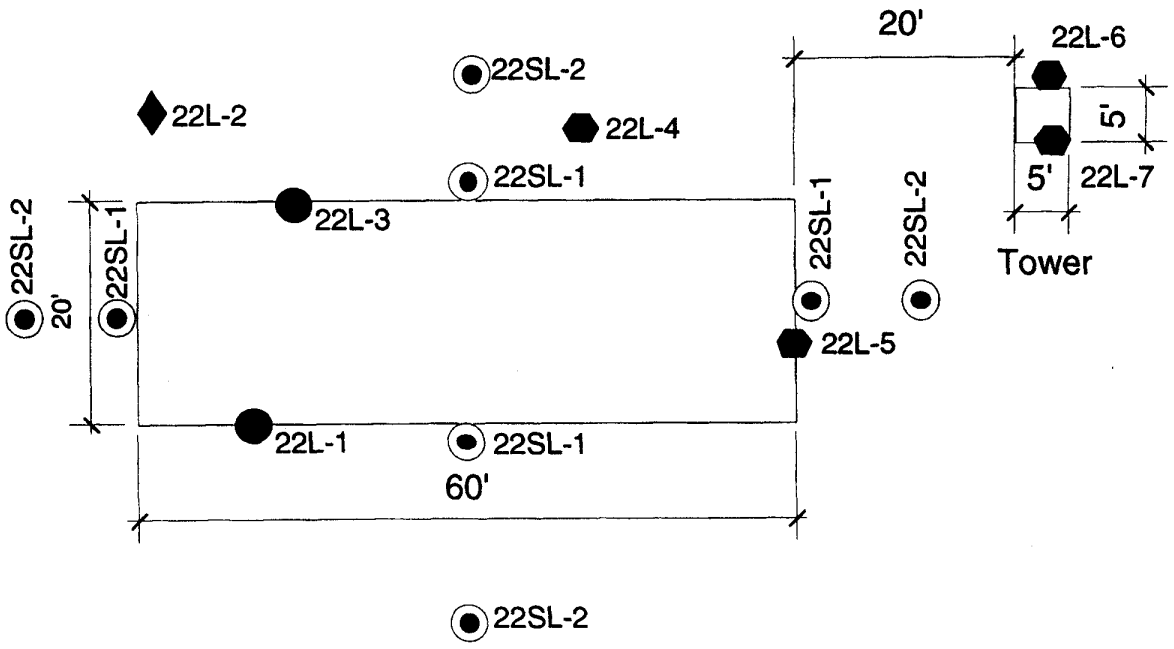
Sample No.	Location	Material Description	Quantity	Unit
22L-1	Wall	Exterior white paint	1,280	SF
22L-2	Roof	Faded red roof paint	1,270	SF
22L-3	Trim	Green/blue trim	320	SF
22L-4	Rail	Faded red rail paint	20	SF
22L-5	Conduit	White paint on conduit	20	SF
22L-6	Tower	White tower paint	300	SF
22L-7	Tower	Faded red tower paint	300	SF

Recommendations

Remove and dispose of all painted materials at the site following asbestos abatement (see Figure 22-2). Remove soil to depth of approximately 1 foot, to a distance of 15 feet from building. Remove soil under building area. Remove tower and stockpile for metals salvage. Perform confirmation sampling for soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 22: AACS Station



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
◉ -Soil
◒ -Dust

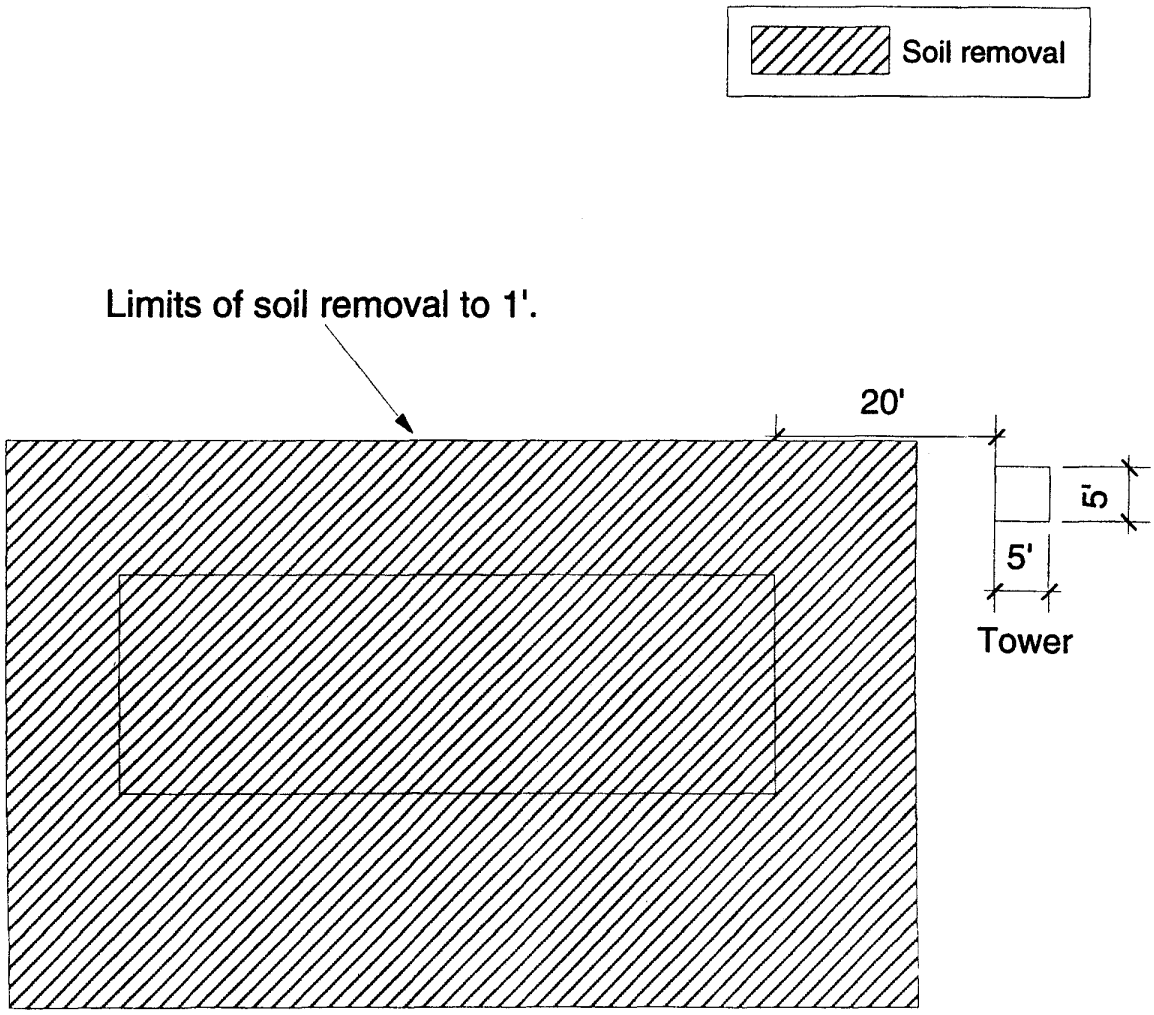
N

0 5 10 20

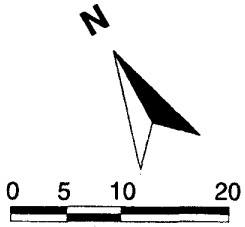
SCALE IN FEET

Site 22 DOD AACS Station

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 22-1
		LBP Sample Locations



Recommendations:
Remove and salvage tower.
Remove debris.
Remove soil to a depth of 1', 15' out from perimeter.
Remove soil under building area.



Site 22 DOD AACS Station

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 22-2
		LBP Abatement Plan

4.9 Site 24 FAA Middle Marker Facility

Description

The remains of the middle marker facility consist of an 8-foot x 12-foot white wood-frame building (see photograph 24). The building is severely deteriorated and termite infested.

Suspect Materials

Four paint chip and two soil samples were collected. They include two interior paints, one exterior paint, and a paint sample from metal poles by the building. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 24-1 for sample locations.

Lead-Based Paint Materials

- Exterior white paint contains 130,000 PPM lead
- Interior green paint contains 43,000 PPM lead
- Interior white paint contains 55,000 PPM lead
- Dripline soil sample contains 2,600 PPM lead

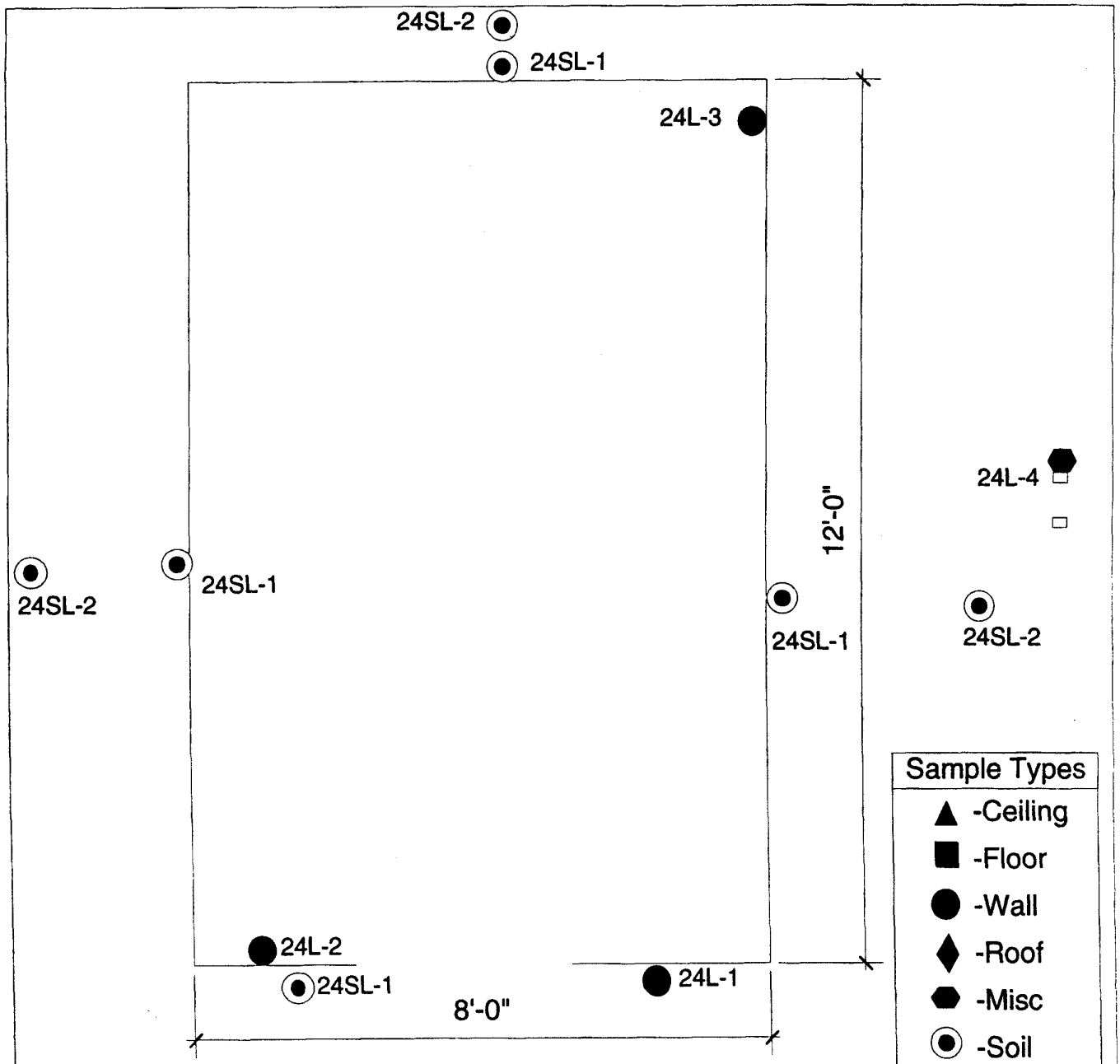
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
24L-1	Exterior	Exterior white	420	SF
24L-2	Interior wall	Interior green	320	SF
24L-3	Interior wall	Interior white	100	SF

Recommendations

Demolish building after asbestos abatement (see Figure 24-2). Clean up soil from dripline to 15 feet from the perimeter, to a depth of 1 foot. Stock excavated soil in designated central location. Perform confirmation sampling of surrounding soil to ensure that the soil remaining after the remedial action is below the cleanup level for lead.

Photograph 24: Middle Marker Facility



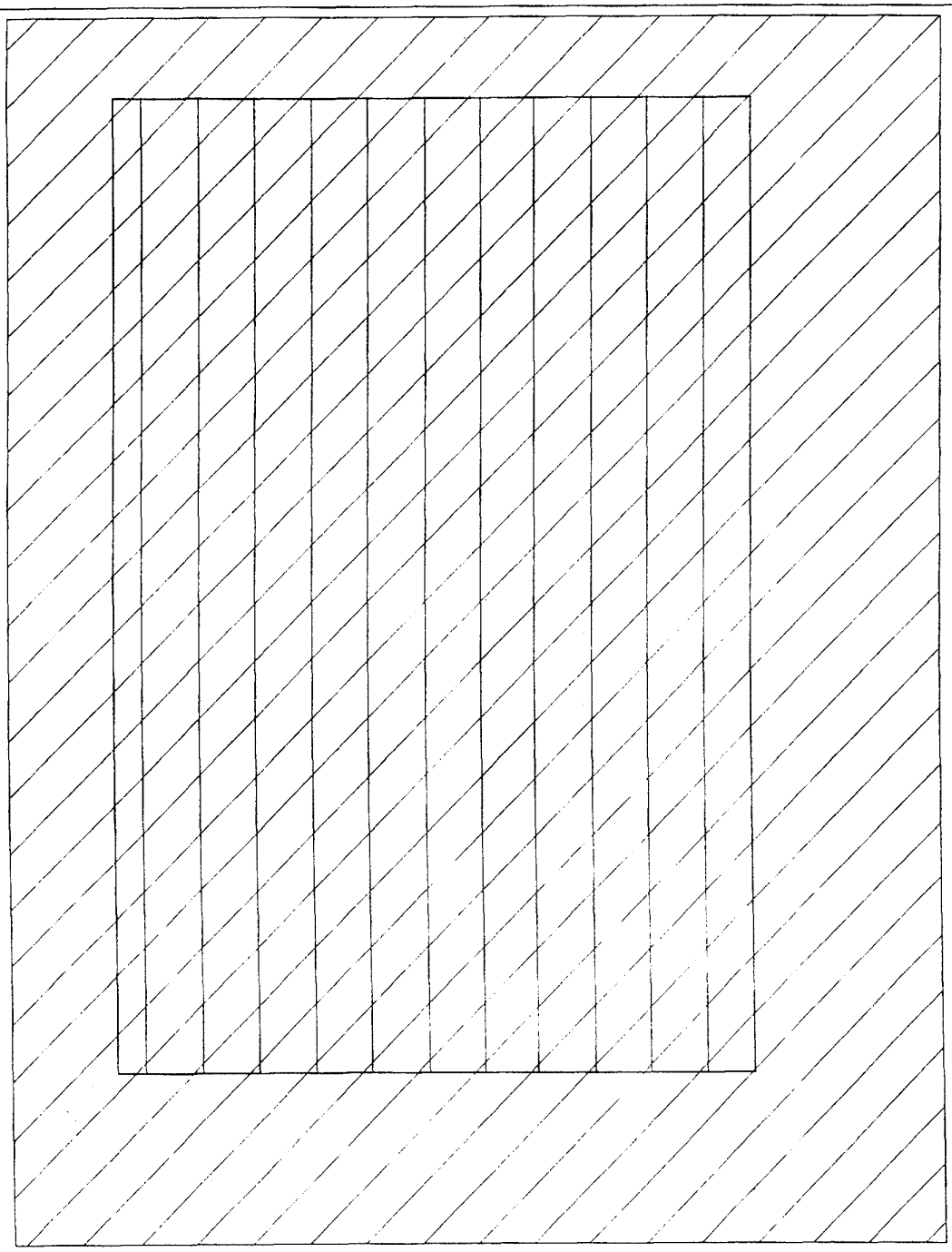
Site 24 Middle Marker Facility Floor Plan

RIDOLFI ENGINEERS

METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION

Figure 24-1

LBP Sample Locations



Recommendations:
Demolish building.
Remove soil to a depth of 1' to a distance of 15' from building, including under building.

Demolish

Soil removal

N

Site 24 Middle Marker Facility Floor Plan

0 1 2 4

SCALE IN FEET

RIDOLFI ENGINEERS

METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION

Figure 24-2

LBP Abatement Plan

4.10 Site 25 FAA Approach Lighting System

Description

The remains of the approach lighting system consist of 31 small, faded red towers that begin at the middle marker facility and terminate at the north end of the main runway (see photograph 25).

Suspect Materials

All towers are painted the same faded red color. Four paint chip samples were taken from three different towers. Two composite soil samples were taken around the eleventh tower from the north end. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 25-1 for sample locations.

Lead-Based Paint Materials

- Faded red tower paint averages 240,000 PPM lead

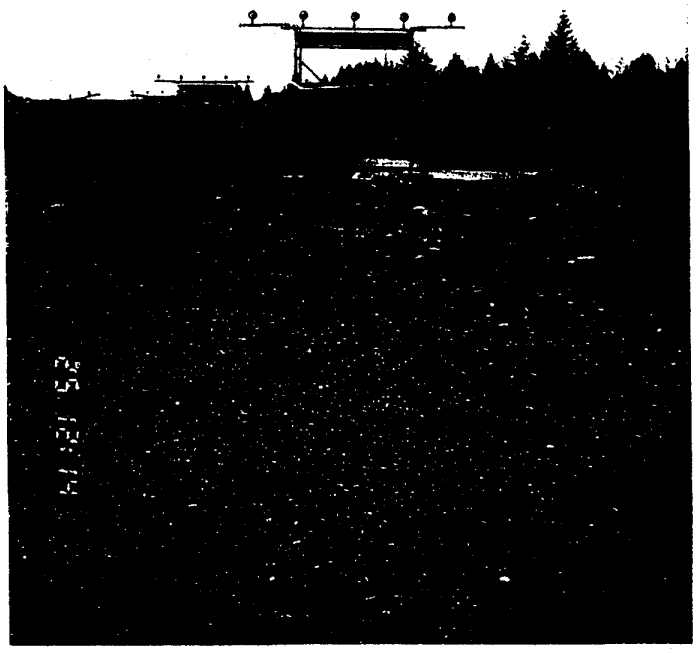
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity*	Unit
25L-1	Towers	Faded red tower paint	250	SF each

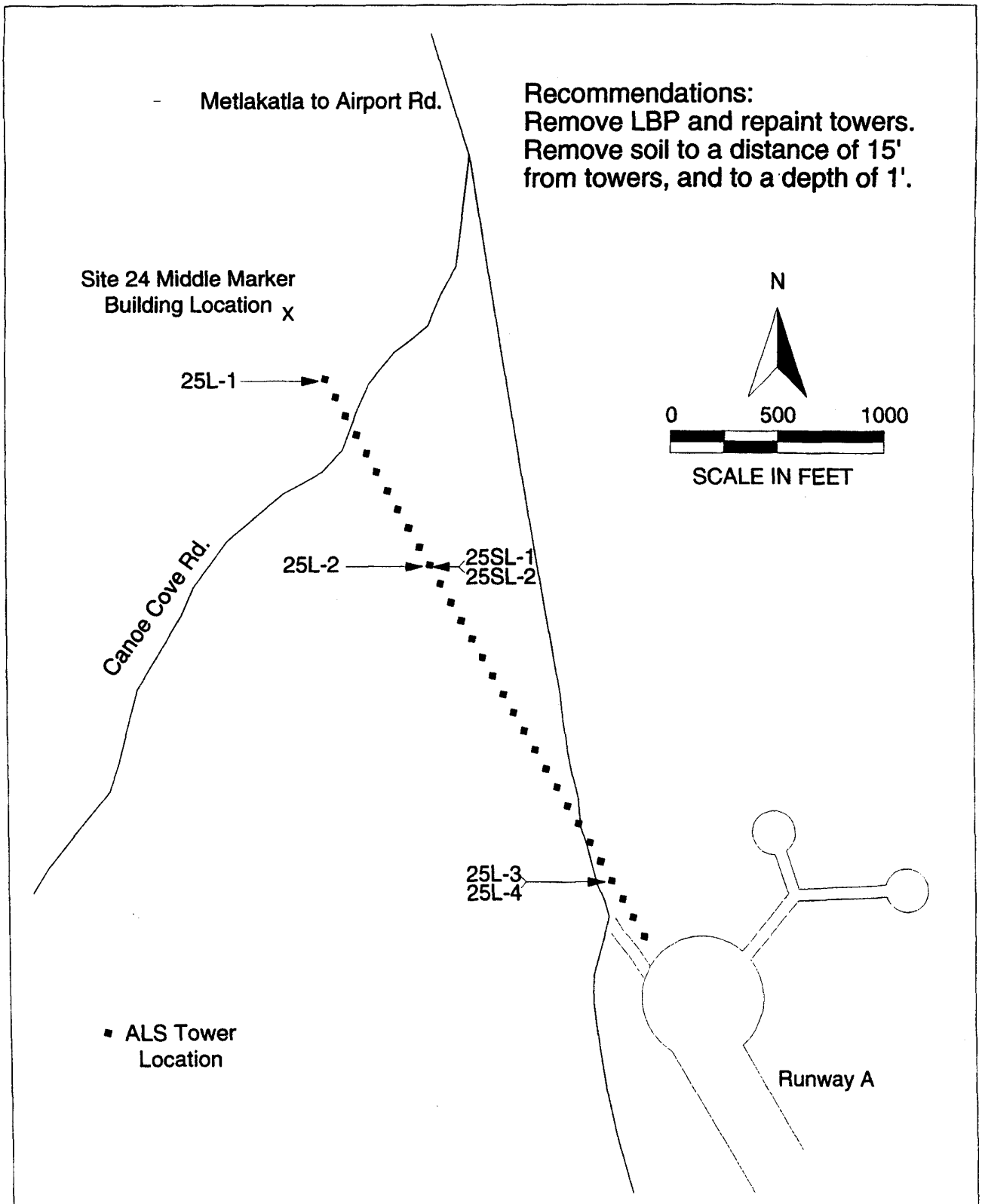
* approximate average per tower

Recommendations

We recommend the mechanical stripping of paint from the towers and repainting with non-LBP, as well as cleanup of soil to a depth of 1 foot, and 15-feet out from tower perimeter. Rocks can be screened for reuse. Stockpile excavated soils in a designated central location.



Photograph 25: Approach Lighting System



Site 25 FAA Approach Lighting System

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 25-1 LBP Sample Locations

4.11 Site 27 Very High Frequency Omnidirectional Range Tactical Air Navigation (VORTAC)

Description

The VORTAC facility consists of a 30-foot x 30-foot concrete block building, an overhead circular metal grid, a nearby elevated storage platform, and metal hazardous material storage boxes (see photograph 27). There have been no previous investigations for LBP at the site. This is a federally locked facility that is posted "No Trespass." Inspectors had no access to this facility.

Photograph 27: VORTAC Facility

4.12 Site 29 Directional Finder Antenna

Description

The directional finder antenna is a 24-foot circular, faded red antenna (see photograph 29). This facility is currently being used by the FAA in conjunction with Site 27 (VORTAC) and Site 30 (FAA Satellite Station). Faded red paint is the only material used on this set-up. The antenna is attached to the tank saddle for the former aboveground storage tank (AST) #14. The AST valve box was not sampled.

Suspect Materials

One paint chip and one perimeter soil sample were collected. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 29-1 for sample locations.

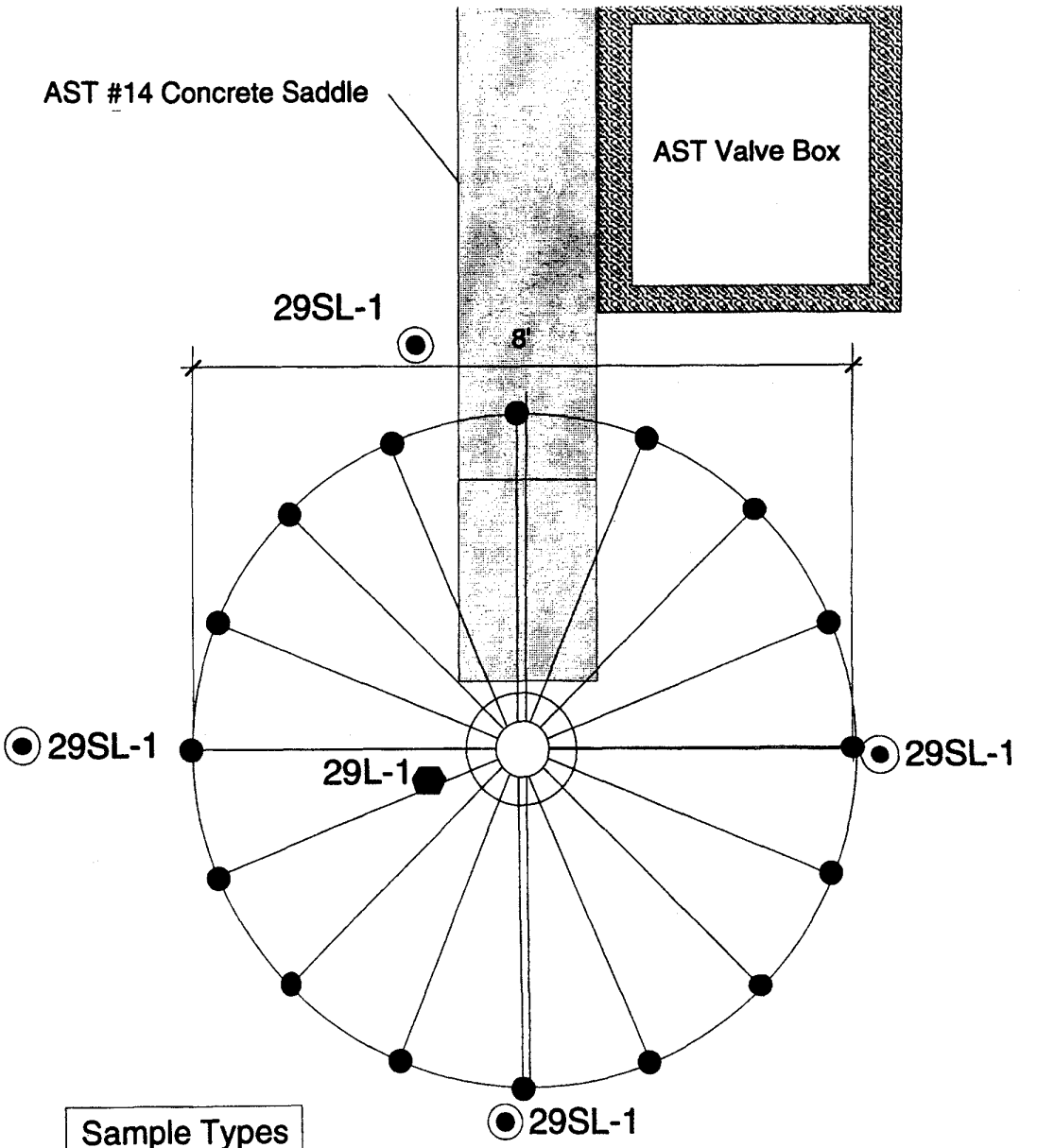
Lead-Based Paint Materials

- The paint chip sample contained less than 5,000 PPM lead

Recommendations

The paint was not found to have elevated levels of lead. No action is recommended.

Photograph 29: Directional Finder Antenna



Recommendations:
None.

Plan View

Site 29 Directional Finder Antenna

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 29-1
		LBP Sample Locations

4.13 Site 32 Short Approach Lighting/Runway Identification Light System (SALSAR)

Description

The remains of the SALSAR consist of a 7-foot x 16-foot x 7-foot faded red metal electrical junction box on a concrete pad (see photograph 32). An adjoining metal 8-foot x 12-foot frame building/office that is 9 feet in height appears to be part of this facility. This building appears to have been originally painted with white paint and possibly with both red and white paint.

Suspect Materials

Two paint chip samples, one each of red and white paint, and two soil samples were collected at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 32-1 for sample locations.

Lead-Based Paint Materials

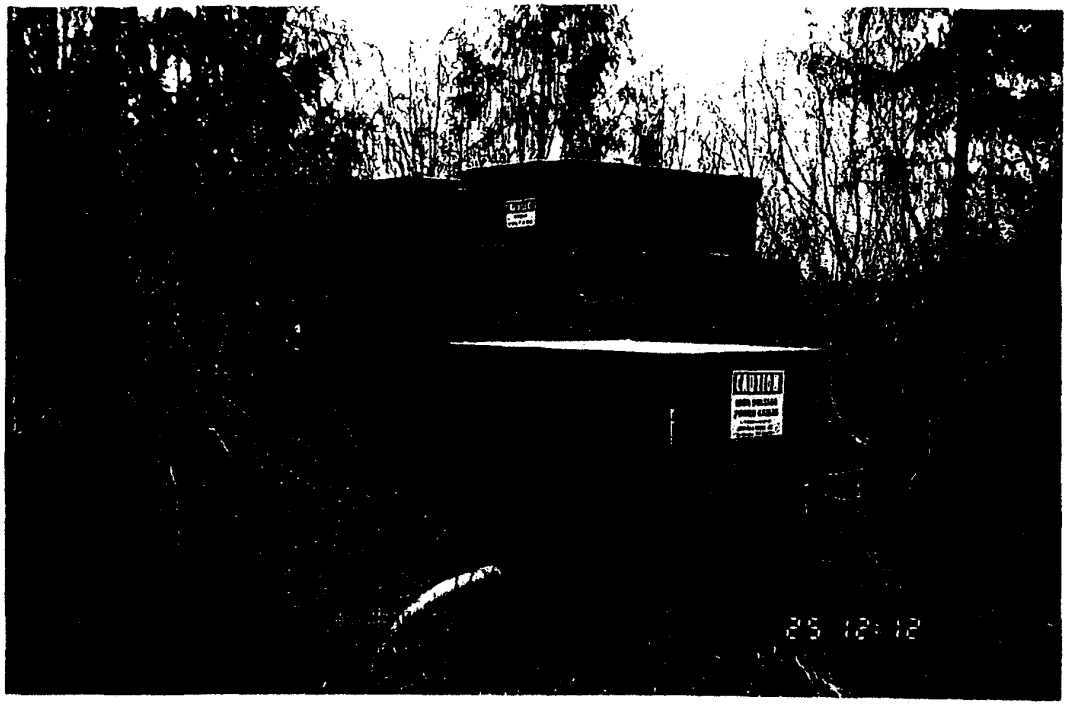
- Faded red structure paint contains 300,000 PPM lead
- Dripline soil sample contains 710 PPM lead

Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
32L-1	Facility	Faded red exterior paint	1,546	SF

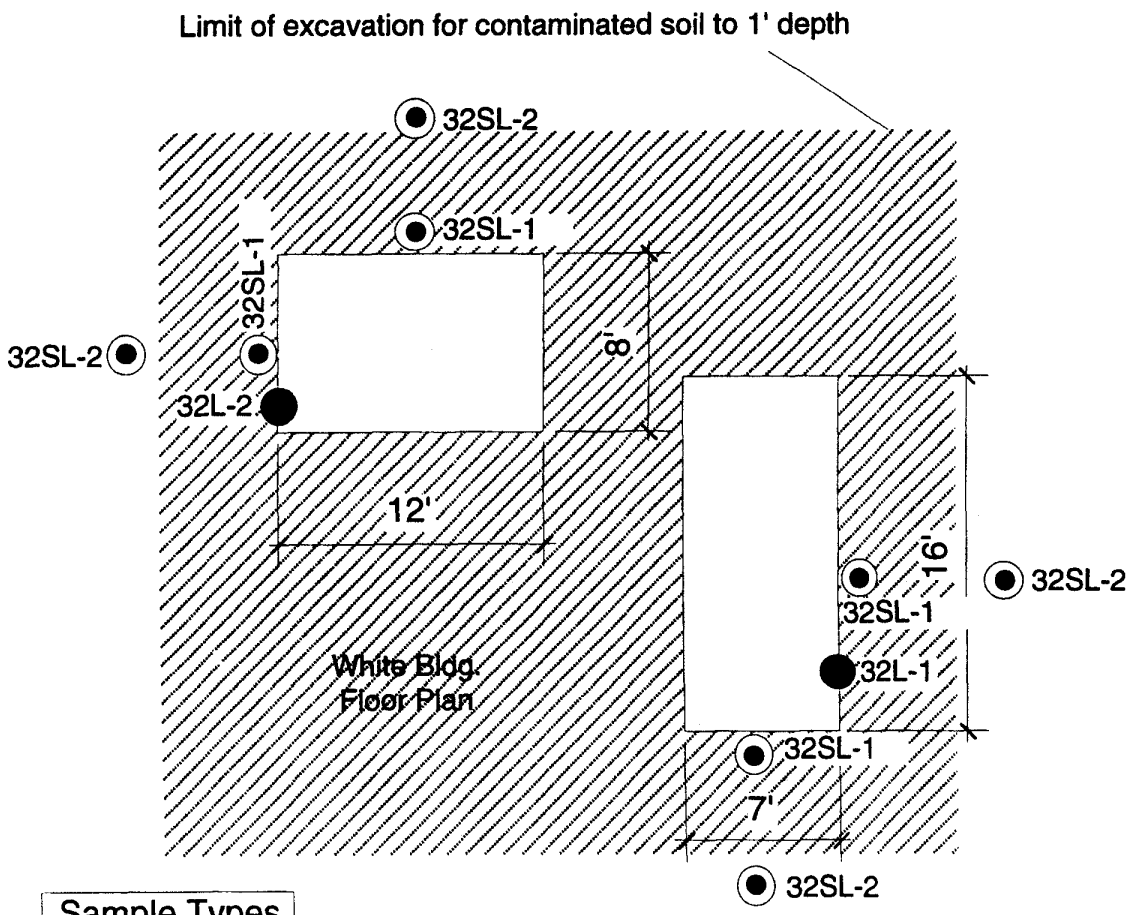
Recommendations

Remove all painted materials at the site. Remove soil to a depth of approximately 1 foot at a 15-foot radius. Stockpile metal for salvage and excavated soils. Perform confirmation sampling of surrounding soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 32: SALSAR

Recommendations:
Remove and salvage metal buildings.
Excavate and remove lead-contaminated
soil to a depth of 1' foot, to a distance of 15'.



Sample Types
- -Ceiling
- -Floor
- -Wall
- -Roof
- -Misc
- -Soil
- -Dust

Soil removal

N

0 2.5 5 10

SCALE IN FEET

Site 32 SALSAR

RIDOLFI ENGINEERS

METLAKATLA PENINSULA
LEAD BASED PAINT
INVESTIGATION

Figure 32-1

LBP Sample Locations

4.14 Site 35 Small Tower

Description

A small, approximately 15-foot-high faded red tower (see photograph 35) is located east of the main runway and south of the Runway to Camp Road.

Suspect Materials

Two paint chip samples and one soil sample were collected at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 35-1 for sample locations.

Lead-Based Paint Materials

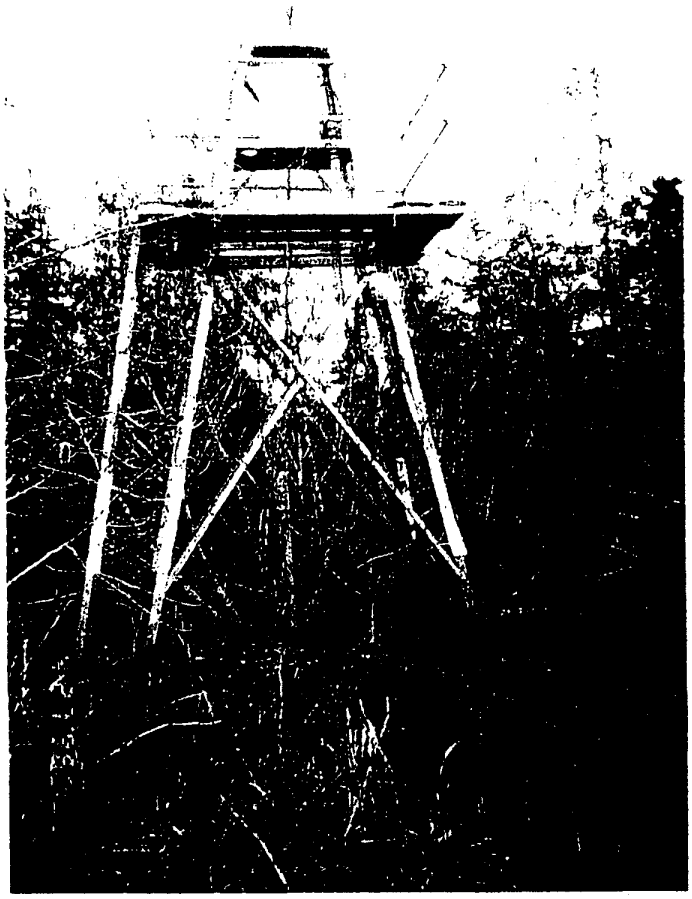
- White tower paint contains 120,000 PPM lead
- Faded red tower paint contains 200,000 PPM lead

Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
35L-1	Towers	White tower paint	125	SF
35L-2	Towers	Faded red tower paint	250	SF

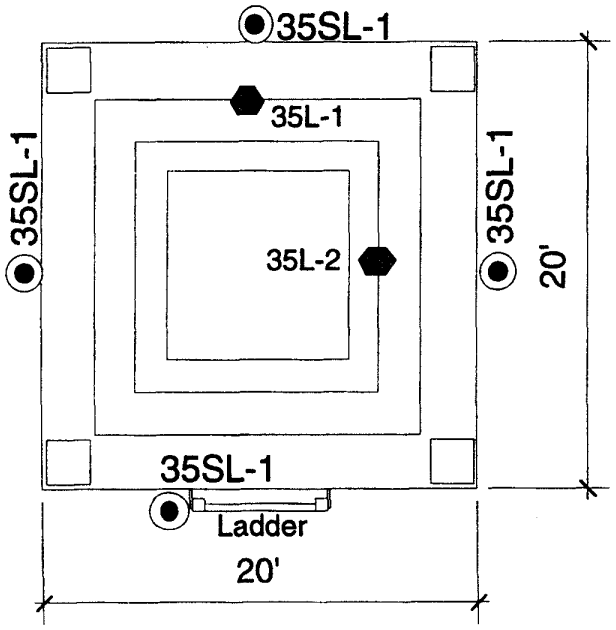
Recommendations

Remove tower and stockpile for salvage. Clean any visible paint chips on ground surface. Perform confirmation sampling of surrounding soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 35: Small Tower

Recommendations:
Remove and salvage tower.
Clean visible paint chips from ground surface.



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
⊙ -Soil
◒ -Dust

N

0 2.5 5 10

SCALE IN FEET

Site 35 Small Tower

RIDOLFI ENGINEERS

METLAKATLA PENINSULA
LEAD BASED PAINT
INVESTIGATION

Figure 35-1

LBP Sample Locations

4.15 Site 36 FAA Glide Slope Facility

Description

The remains of the FAA glide slope facility consist of an 8-foot x 8-foot faded red-and-white wood-frame building (see photograph 36) and a 10-foot faded red-and-white tower, both constructed in 1952. The building is severely deteriorated and termite infested. It contains abandoned electronic equipment and vinyl tile flooring.

Suspect Materials

Six paint chip samples of five different suspect paints were collected. Two soil samples were also collected. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 36-1 for sample locations.

Lead-Based Paint Materials

- Faded red paint on the building and tower contains 480,000 PPM lead
- White paint on the building and tower contains 27,000 PPM lead
- Blue/gray trim paint contains 13,000 PPM lead
- Ceiling and wall interior contains 5,700 PPM lead
- Porch blue/gray paint averages 7,600 PPM lead
- Building dripline soil sample contains 1,700 PPM lead

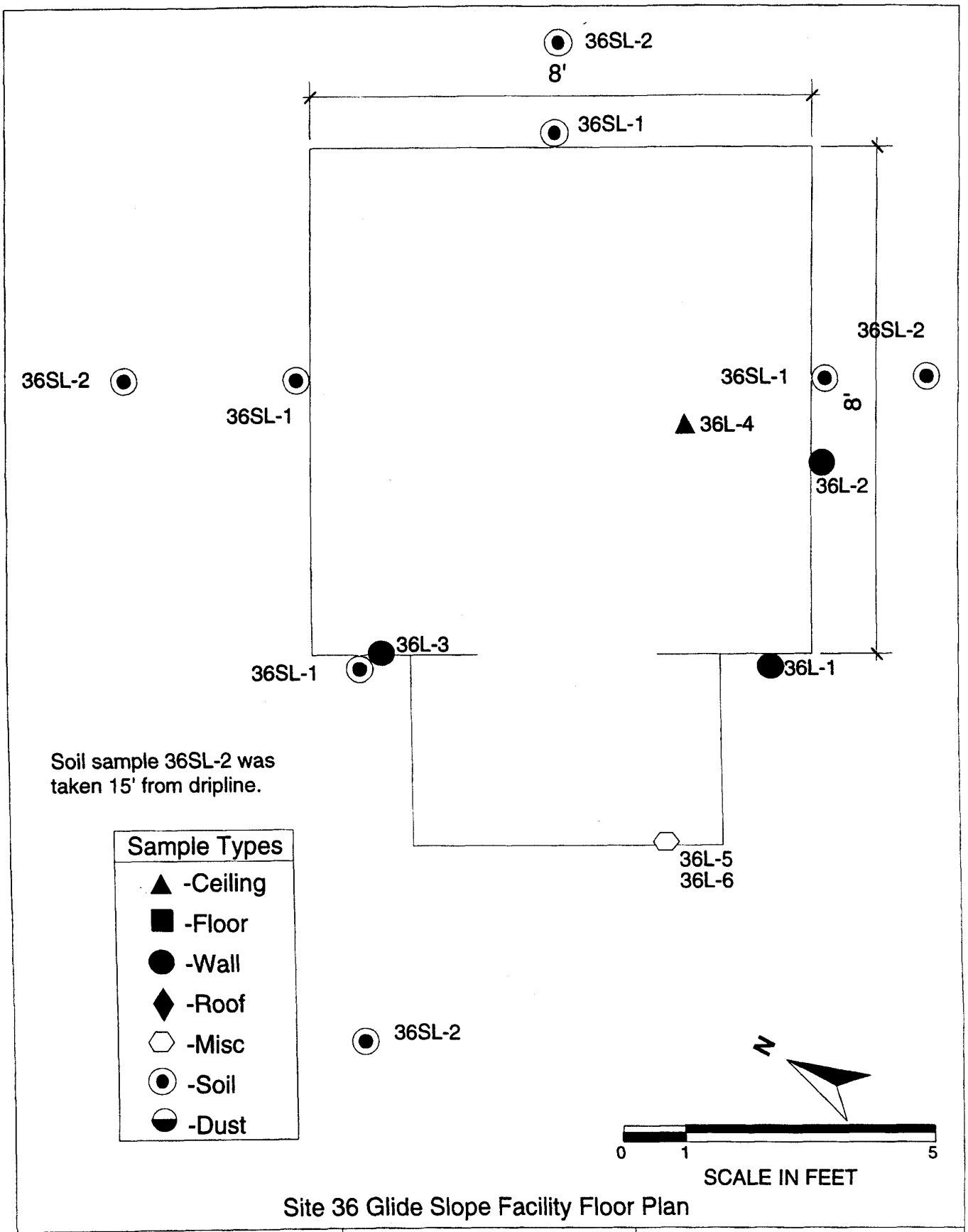
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
36L-1	Exterior	Faded red paint	268	SF
36L-2	Exterior	White paint	368	SF
36L-3	Interior trim	Blue/gray trim paint	128	SF
36L-4	Interior ceiling & wall	Ceiling & wall interior	208	SF
36L-5 & -6	Exterior porch	Porch blue/gray	26	SF

Recommendations

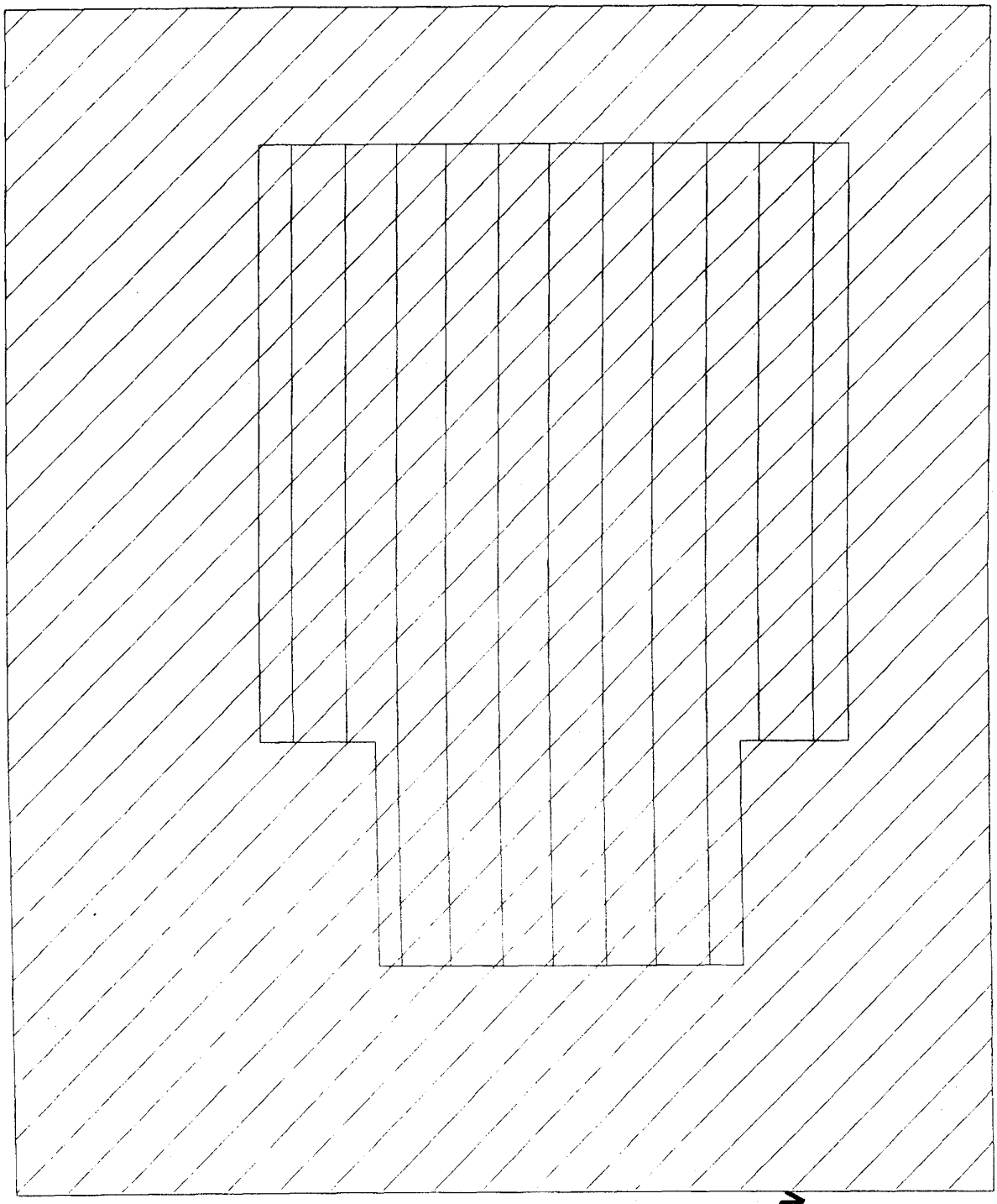
Demolish building structure and tower after asbestos is abated. Clean and remove top 1 foot of soils from under building to a 15-foot distance around building and tower (see Figure 36-2). Stockpile excavated soils. Perform confirmation sampling for soil to ensure that the soil remaining after the remedial action is below the cleanup level for lead. Stockpile metal tower for salvage.

Photograph 36: Glide Slope Facility



Site 36 Glide Slope Facility Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 36-1
		LBP Sample Locations



Recommendations:
Demolish building.
Remove soil to a depth of 1' to a distance of 15' from building, including under building.

N

0 1 5

SCALE IN FEET

Demolish

Soil removal

Site 36 Glide Slope Facility Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 36-2
		LBP Abatement Plan

4.16 Site 37 FAA Sand Shed/Asphalt Plant

Description

The remains of the FAA metal sand shed consist of charred wood debris, metal, and remnants of a sand pile (see photograph 37). Sand was imported by the FAA and used on the runways during icy winter conditions (Ridolfi, 1996). No asphalt plant building currently exists, although a layer of tar covers the surface of the ground around the former site of the sand shed. Several 55-gallon barrels were observed resting on the ground, and partially buried 55-gallon barrels were observed around the north and south perimeter of the area leveled for the sand shed/asphalt plant. A 110-foot x 300-foot area west of the sand shed appeared to be a zone of fill material.

Suspect Materials

One paint chip and one soil sample were collected at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 37-1 for sample locations.

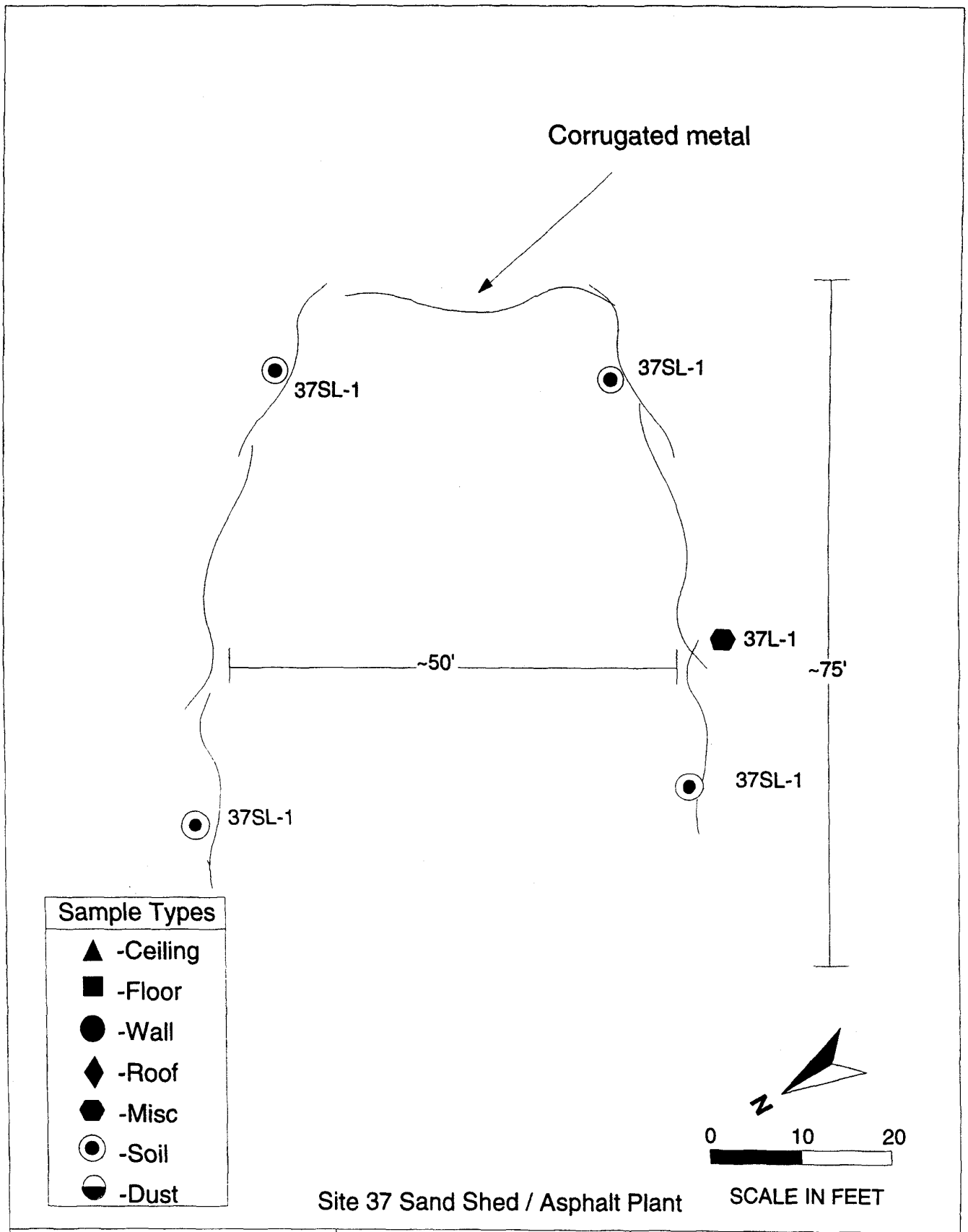
Lead-Based Paint Materials

- Soil sample contains 2,000 PPM lead

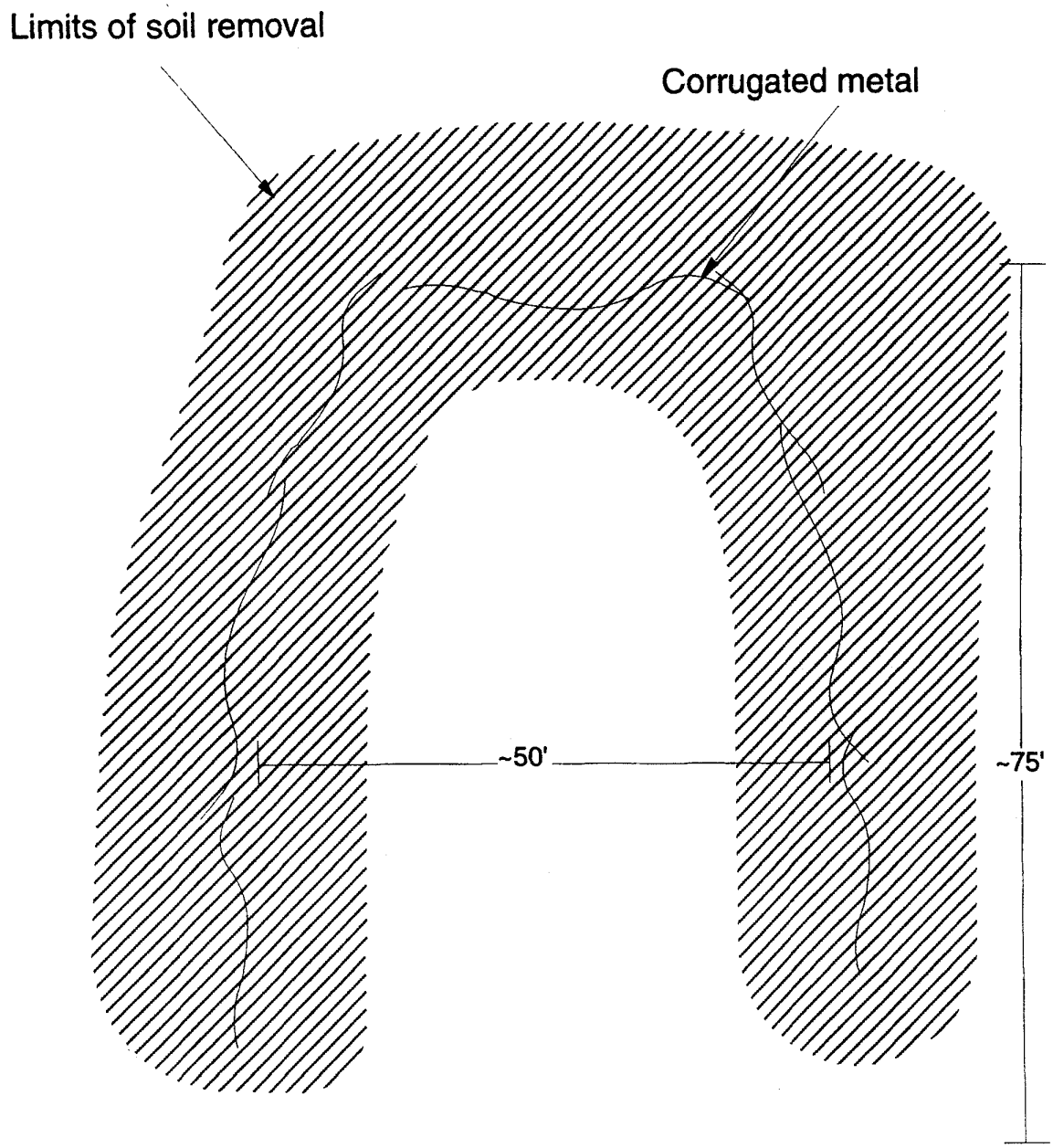
Recommendations

Remove and stockpile for salvage all corrugated metal. Consolidate sand into center of area. Remove contaminated soil to a depth of 1 foot from a 20-foot swatch (see Figure 37-2). Stockpile excavated soils. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.

Photograph 37: Sand Shed/Asphalt Plant



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 37-1
		LBP Sample Locations



Recommendations:
Remove and salvage metal.
Remove soil to depth of 1'.

Soil removal

N

0 10 20

SCALE IN FEET

Site 37 Sand Shed / Asphalt Plant

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 37-2
		LBP Abatement Plan

4.17 Site 42 FAA Tank Farm

Description

The FAA tank farm is an unbermed area of approximately 180 feet x 250 feet. The remains of the tank farm consist of a truck tanker fuel loading dock (see photograph 42), seven 50,000-gallon ASTs, two 25,000-gallon ASTs, one 12,000-gallon AST, three 10,000-gallon ASTs, and associated pipelines. A cleared area approximately 75 feet wide immediately west of the 50,000-gallon ASTs at one time contained an additional eight 50,000-gallon ASTs, which were moved to the electric generating plant in Metlakatla in the late 1980s. Soil in the tank farm area is stained and has a strong petroleum odor. Petroleum sheens were observed on ponded water, in the tank farm area, and emanating from some tank farm piping.

Suspect Materials

Seven paint chip samples were collected from the bulkload rack, building, tanks, valves, pipeline, and pumps. Two composite soil samples were collected at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 42-1 for sample locations.

Lead-Based Paint Materials

- Exterior of small building averages 107,000 PPM lead
- Exterior 10,000- to 25,000-gallon tanks contain 460,000 PPM lead
- Exterior 50,000-gallon tank contains 79,000 PPM lead
- Red paint on valves, roofs, trim, pumps, and filters contains 65,000 PPM lead
- Green paint on pump meters contains 59,000 PPM lead
- Black pipeline paint contains 83,000 PPM lead

Summary of LBP Quantities

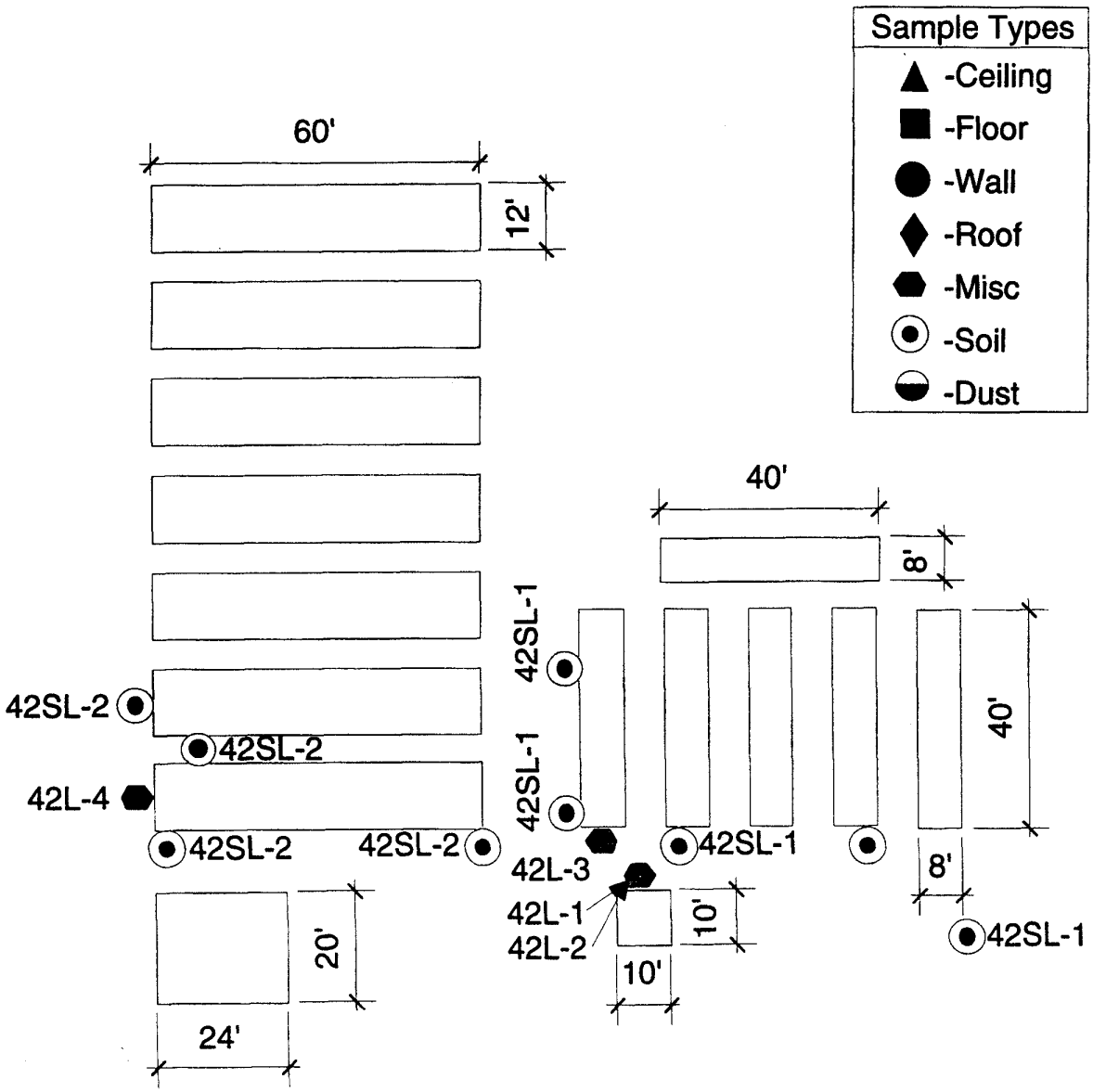
Sample No.	Location	Material Description	Quantity	Unit
42L-1 & -2	Exterior	White exterior bldg. paint	350	SF
42L-3	Exterior 10,000- to 25,000-gal. tanks	Silver exterior paint	1,106*	SF
42L-4	Exterior 50,000-gal. tank	Silver exterior paint	2,488*	SF
42L-5	Valves, pumps, roofs, trim	Red paint	250	SF
42L-6	Pump meters	Green paint	20	SF
42L-7	Pipeline	Black pipeline paint	800	LF

* per tank

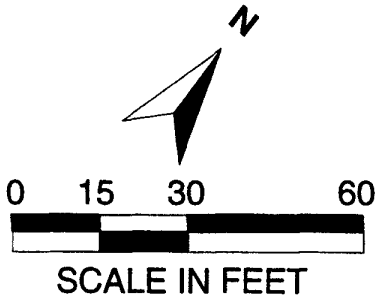
Recommendations

Cut and clean tanks, piping, and bulkload rack before salvage. Remove soil to a depth of 1 foot after tank removal to a distance 15 feet out from the perimeter, including area where tanks were previously located (see Figure 42-2). This soil is petroleum-contaminated and should be disposed of instead of stockpiled.

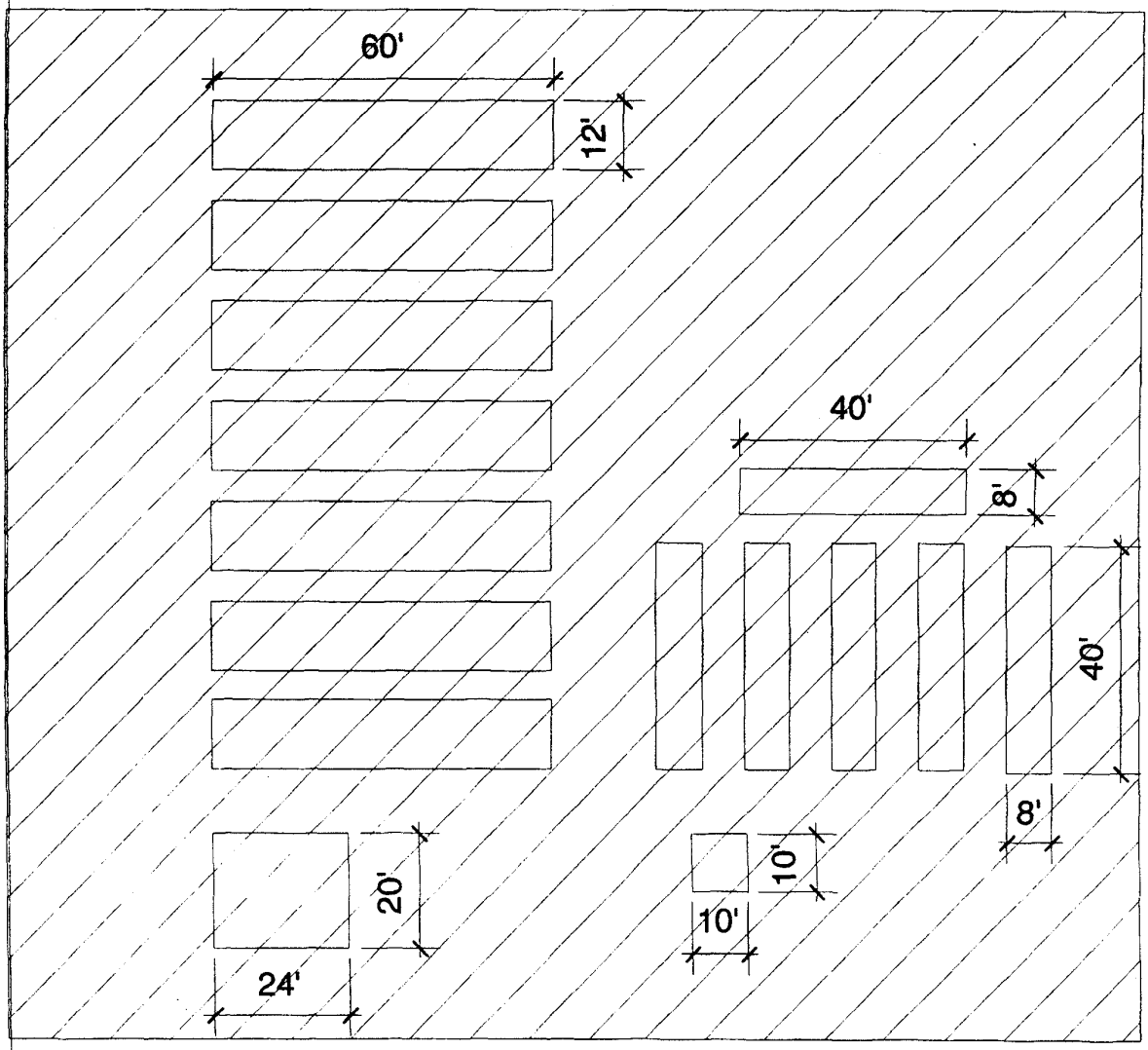
Photograph 42 : FAA Tank Farm



Site 42 FAA Tank Farm



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 42-1
		LBP Sample Locations



Recommendations:
Clean, cut up and salvage tanks.
Remove 1' soil to a distance of 15' from tanks, including where tanks were previously located.

N

0 15 30 60

SCALE IN FEET

Site 42 FAA Tank Farm

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 42-2
		LBP Abatement Plan

4.18 Site 46 USCG Fire Station/Post Exchange

Description

The remains of the fire station/post exchange consist of a 50-foot x 80-foot, single-story, cement block building (see photograph 46). The building replaced an airplane engine nose hangar and was constructed by the Coast Guard after World War II. The building housed a fire station and the Coast Guard post exchange. Roofing debris litters the area immediately north of the building.

Suspect Materials

Five paint chip and two soil samples were collected. Paint chip samples included two exterior paints, including the trim, and three interior paints. The total interior surface area was approximately 3,300 square feet, with different paint colors made up mostly of blue, green, and white. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 46-1 for sample locations.

Lead-Based Paint Materials

- Exterior red trim contains 5,500 PPM lead
- Green interior paint contains 5,400 PPM lead
- Blue interior paint contains 130,000 PPM lead

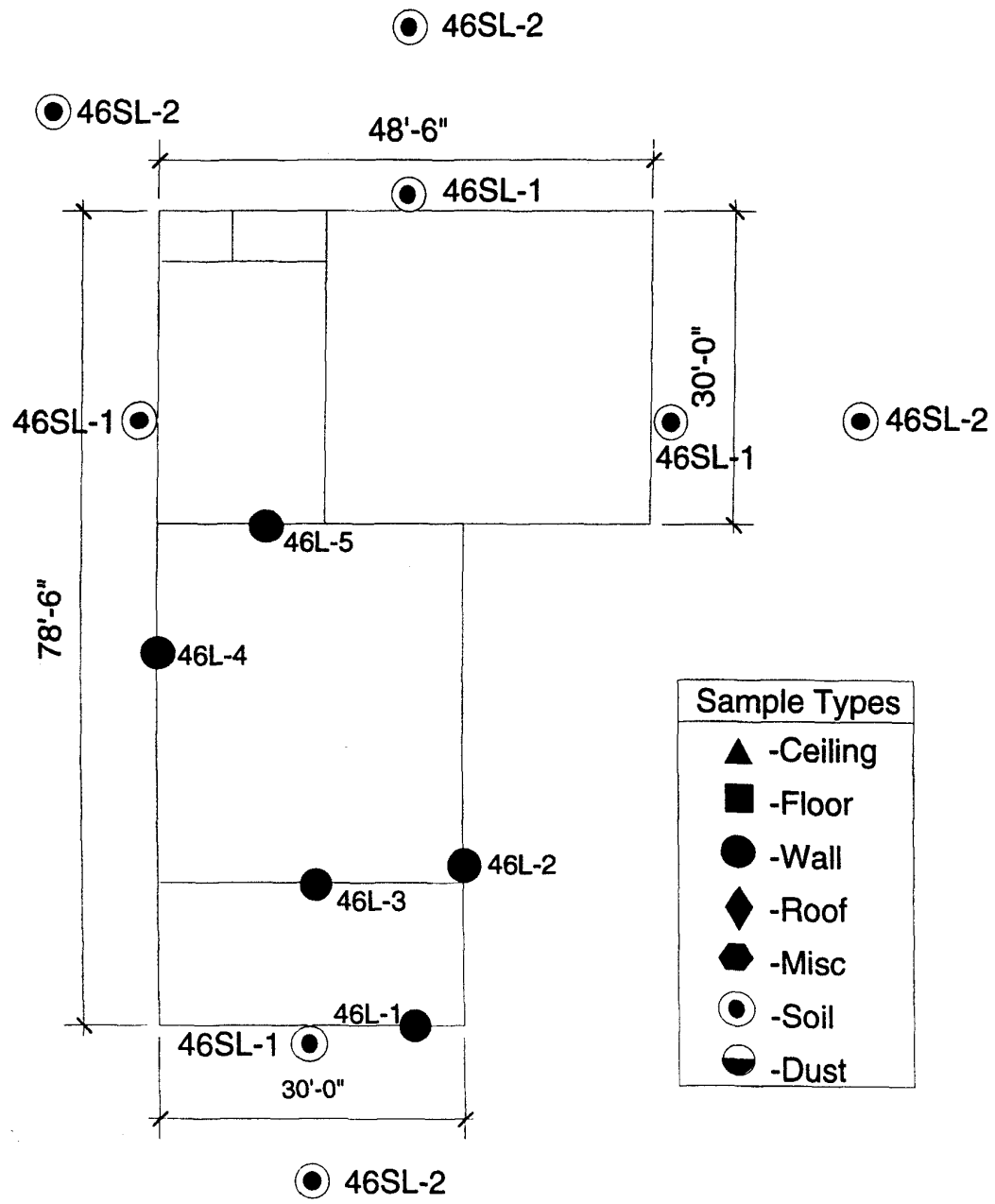
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
46L-2	Exterior	Exterior red trim	3,015	SF
46L-4	Interior	Green interior paint	3,300	SF
46L-5	Interior	Blue interior paint	Included above	SF

Recommendations

Remove LBP with needle gun and salvage building. Vacuum building with a HEPA vacuum after paint removal.

Photograph 46: USCG Fire Station/Post Exchange



Recommendations:
Remove LBP and salvage building.
Vacuum building with HEPA vacuum.

Site 46 USGS Fire Station/Post Exchange
Floor Plan

0 5 10 20
SCALE IN FEET

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 46-1
		LBP Sample Locations

4.19 Site 48 Main Construction Camp

Description

The majority of DOD buildings that once comprised the main construction camp and the subsequent camp garrison no longer exist (see photograph 48). Remains of the former DOD buildings include concrete and wood foundations, wood debris, metal roofing debris, and wood pilings. Eight of the original DOD buildings (faded red roofs) in the main construction camp were used by the FAA until the mid 1970s.

Suspect Materials

Three paint chip and two soil samples were taken in this area. Paint chip samples were collected from structure remains wherever possible. Soil samples were composites from two random grids. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 48-1 for sample locations.

Lead-Based Paint Materials

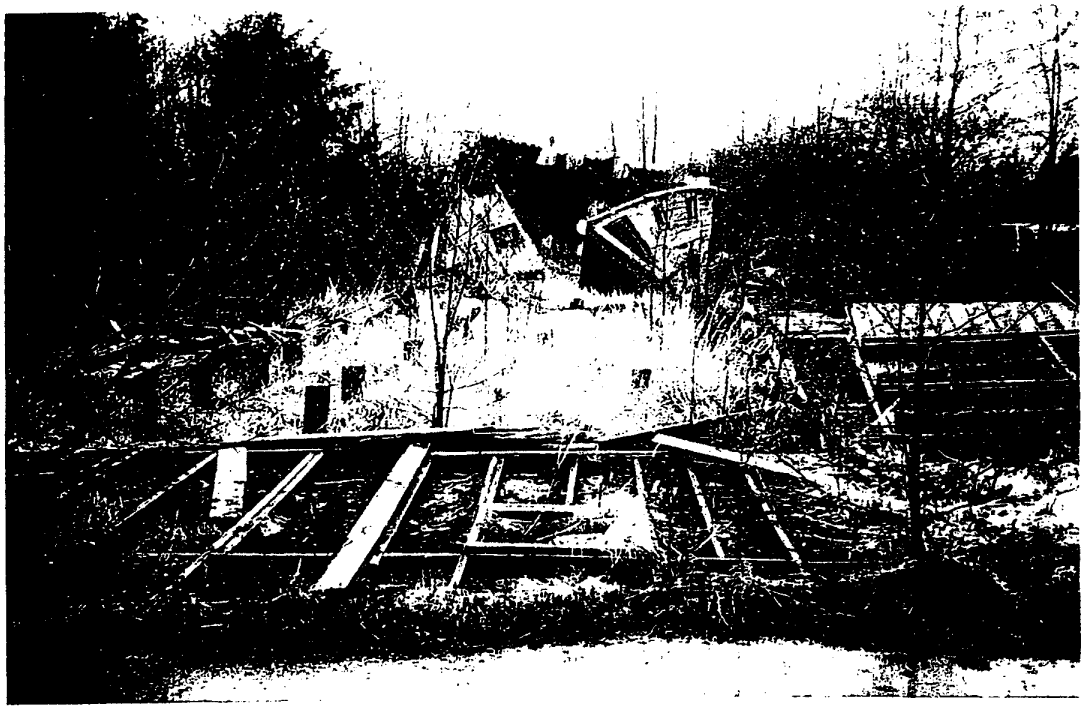
- Interior wall paint composite contains 4,800 PPM lead
- Green exterior paint off former building contains 7,600 PPM lead. Unknown quantity due to the deteriorated nature of the building.
- Composite soil sample from area 2 contains 970 PPM lead

Summary of LBP Quantities

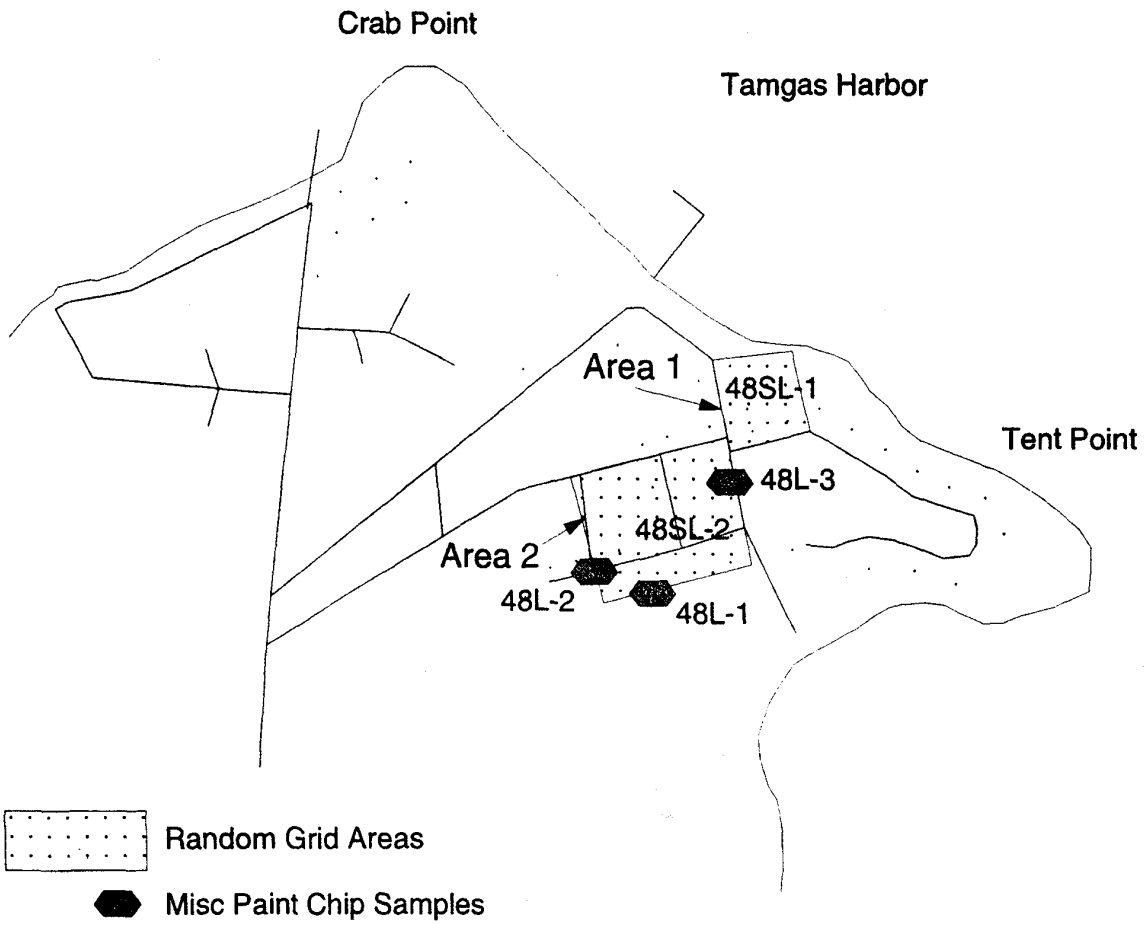
Sample No.	Location	Material Description	Quantity	Unit
48L-1	USCG Building	Composite wall paint	unknown	-
48L-3	Main Camp Area	Army green paint	unknown	-

Recommendations

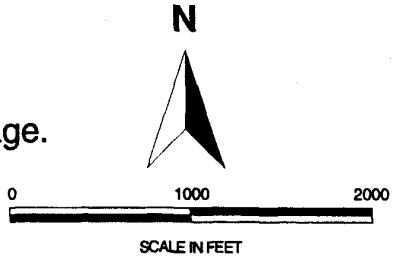
Remove and dispose of collapsed buildings and non-metal debris. Remove and stockpile for salvage all cars, equipment, and miscellaneous metal. Clear and grub area 2 before excavating 1 foot of soil across site. Stockpile excavated soils.



Photograph 48: Main Construction Camp



Recommendations:
Demolish and remove structures.
Stock pile all cars, equipment and metals for salvage.
Clear and grub Area 2 and remove 1' of soil.



Site 48 Main Construction Camp

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 48-1
		LBP Sample Locations

4.20 Site 49 DOD Gasoline Station

Description

Remains of the DOD gasoline station consist of an approximately 30-foot x 40-foot faded red metal building with two petroleum dispensers and a wood floor (most of which has been removed) built on wood pilings (see photograph 49). The station was used to fuel vehicles until the mid 1970s (Ridolfi, 1996). A magnetic survey detected buried pipelines running from each dispenser to areas within the tree line that have visible pipes at the surface which terminate near AST cribbing. Soil in the area had a petroleum odor. A dilapidated trailer was parked immediately north of the station.

Suspect Materials

Two paint chip samples and two soil samples were collected from this site. Paint chip samples were of exterior and interior paints. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 49-1 for sample locations.

Lead-Based Paint Materials

- Red exterior paint contains 67,000 PPM lead
- Dripline soil sample contains 1,700 PPM lead

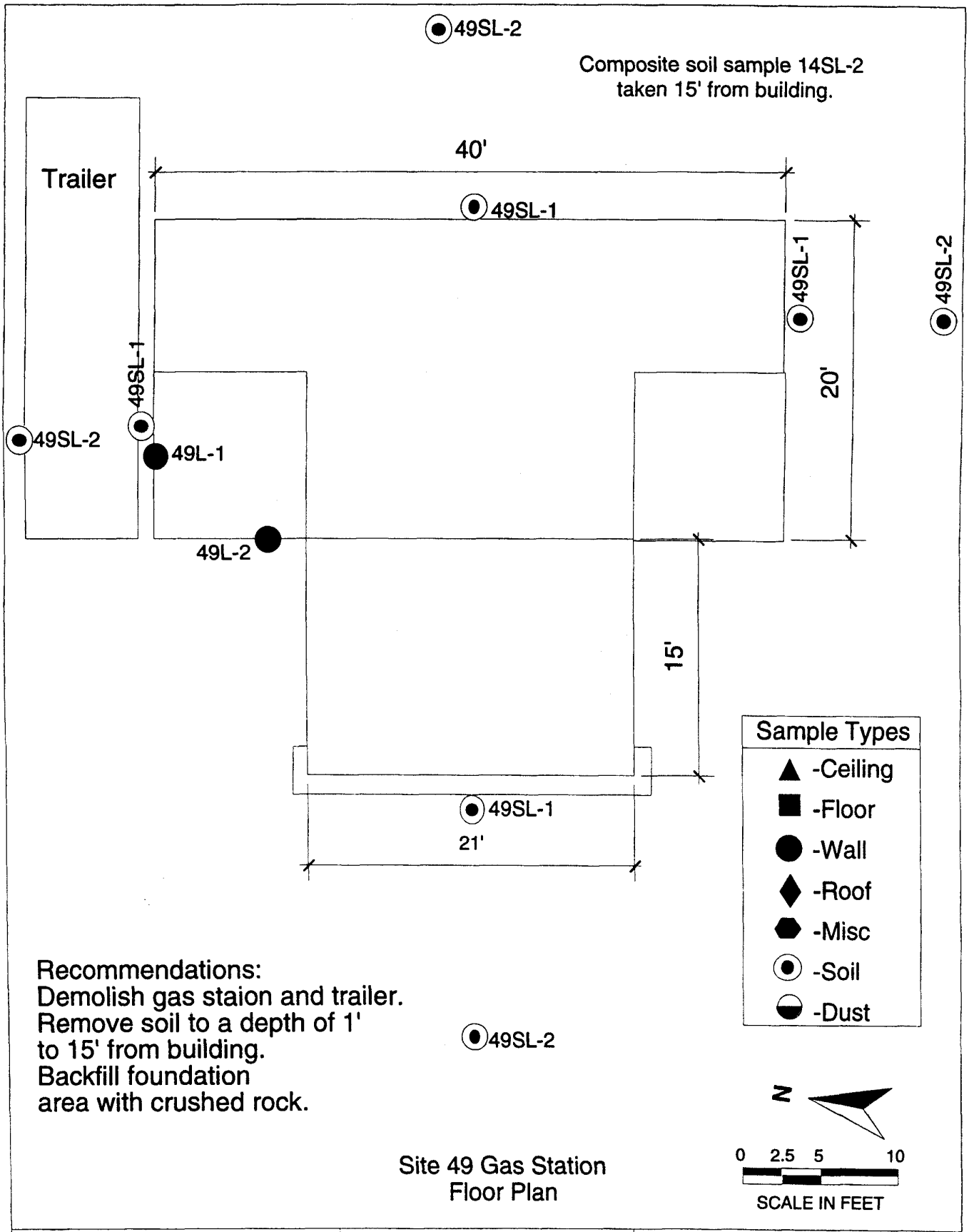
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
49L-1	Exterior	Faded red exterior paint	3,178	SF

Recommendations

Demolish and dispose of structure and trailer. Clean up soil to a distance of 15 feet from building to a depth of 1 foot. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead. Fill in depression left after building removal with crushed rock.

Photograph 49: Gasoline Station



RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 49-1
		LBP Sample Locations

4.21 Site 50 DOD/FAA Fire Truck Hut

Description

Remains of the fire truck hut consist of an approximately 17-foot x 64-foot faded red metal building with a concrete foundation (see photograph 50). A fire truck was formerly housed by the FAA in the northern 70 percent of the building. A boiler room occupied the south end of the structure. The boiler, still present, was used to keep the building heated and the fire truck operational at all times of year.

Suspect Materials

Three paint chip and two soil samples were collected at this site. Paint chip samples were of two exterior paints and one interior paint. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 50-1 for sample locations.

Lead-Based Paint Materials

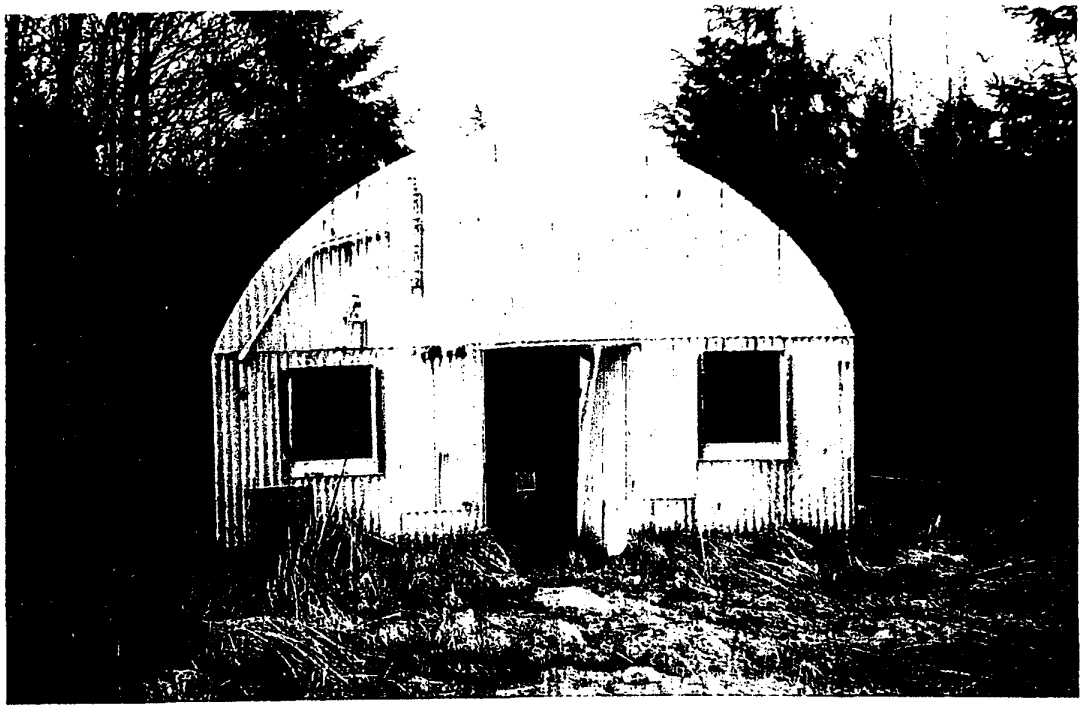
- Interior white paint contains 190,000 PPM lead
- Exterior red paint contains 96,000 PPM lead
- Exterior faded red paint contains 280,000 PPM lead
- Dripline composite soil sample contains 6,600 PPM lead

Summary of LBP Quantities

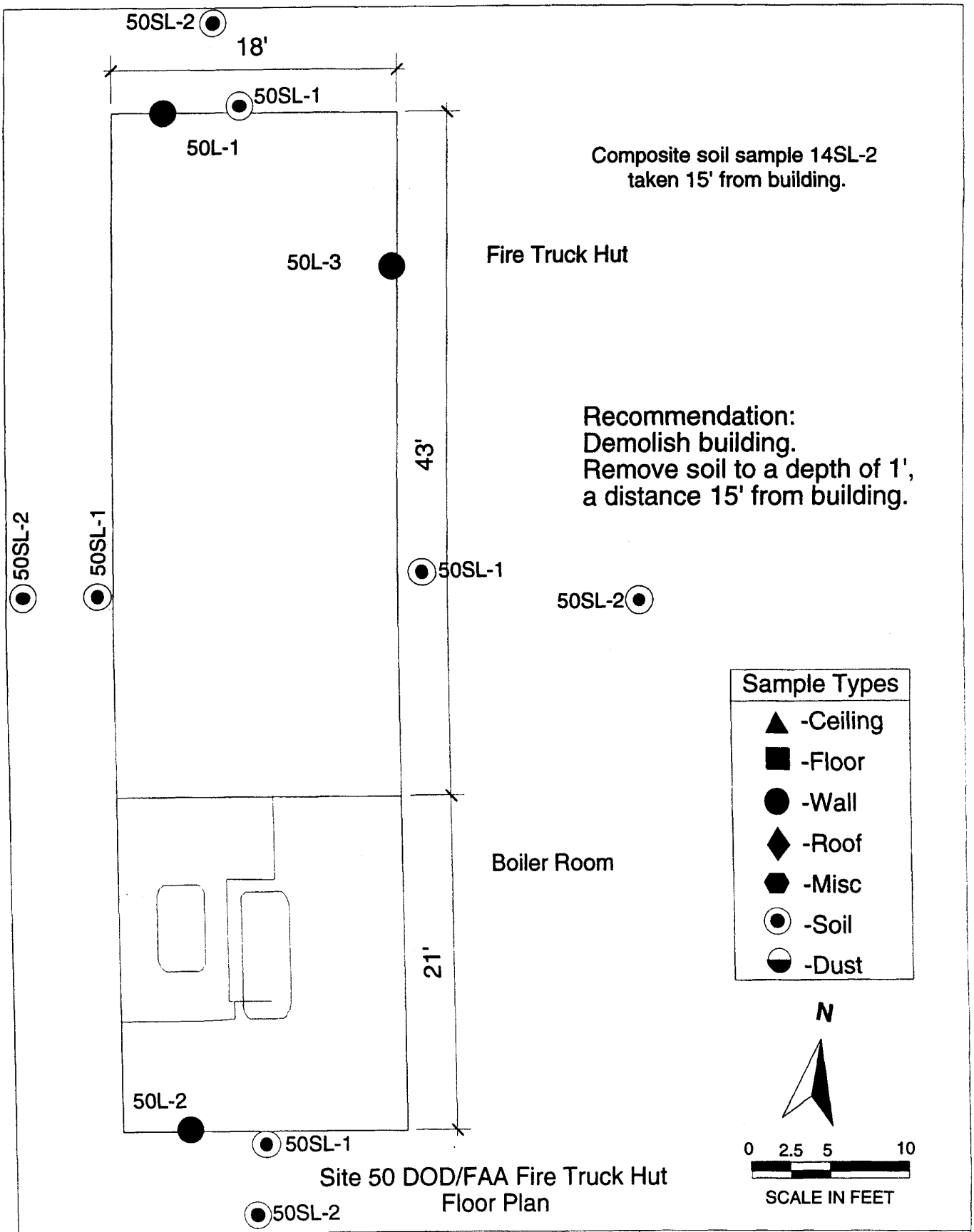
Sample No.	Location	Material Description	Quantity	Unit
50L-3	Interior	Interior white paint	1,148	SF
50L-1, -2	Exterior	Exterior red paint	2,175	SF

Recommendations

Demolish structure after asbestos is abated and clean debris from site. Stockpile metal for salvage. Remove contaminated soil within 15 feet of structure to a depth of 1 foot. Stockpile excavated soils. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 50: Fire Truck Hut



Site 50 DOD/FAA Fire Truck Hut
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 50-1 LBP Sample Locations

4.22 Site 53 FAA Housing Area

Description

The FAA housing area consists of nine three-story, 30-foot x 50-foot, wood-frame structures (see photograph 53). The buildings all have full basements. One of the buildings houses the MIC forestry and fisheries departments, three are used as residences by MIC members, and five are vacant. Interior paint chip samples were taken from unoccupied buildings. Exterior paint chip samples were taken from both occupied and unoccupied buildings. Dust wipe samples were taken only from occupied buildings.

Suspect Materials

Fourteen paint chip, five soil, and five dust wipe samples were taken at this site. Exterior paint chip samples were taken from four of the buildings. Soil samples were taken around two of the units, one occupied and one unoccupied. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 53-1 for sample locations.

Lead-Based Paint Materials

- Exterior house paints average 12,000 PPM lead
- Exterior trims average 24,000 PPM lead
- Interior white/yellow paint contains 11,000 PPM lead (kitchen only)
- Dripline soil samples contain 490, 1,600, and 1,000 PPM lead

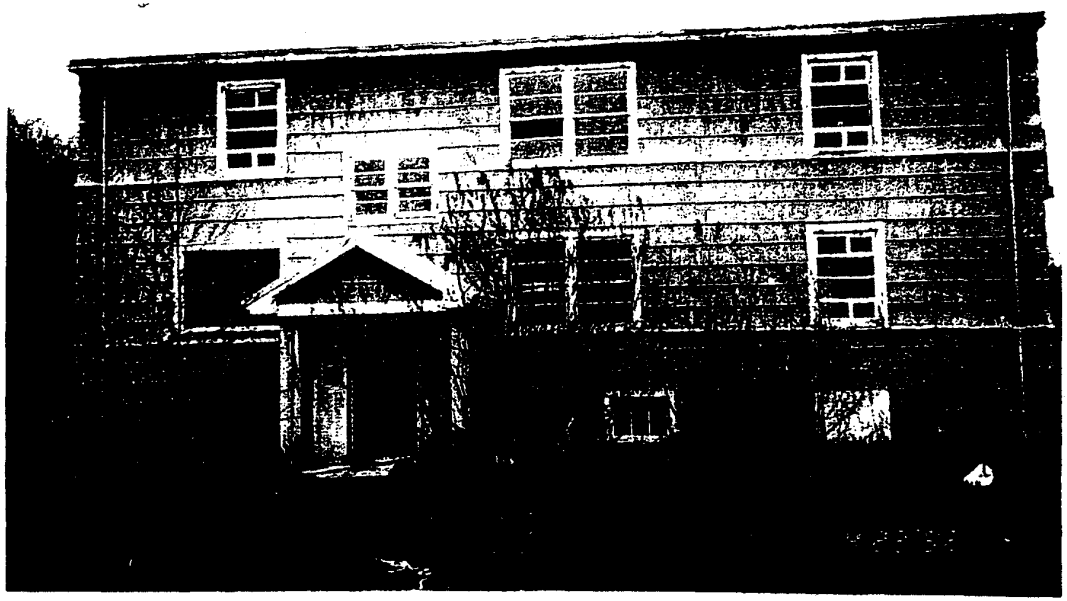
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity*	Unit
53L-1	Exterior	Pink paint	3,628	SF
53L-2	Exterior trim & doors	White trim & doors	182	SF
53L-3	Exterior trim & doors	White trim & doors	182	SF
53L-9	Wall kitchen	White wall (Yellow sublayer)	260	SF
53L-12	Exterior	Blue exterior paint	3,628	SF
53L-13	Exterior	Brown exterior paint	3,628	SF
53L-14	Exterior	Pinkish-white exterior paint	3,628	SF
53SL-1	Dripline of buildings	Soil sample	-	-
53SL-2	Dripline of buildings	Soil sample	-	-
53SL-4	Dripline of buildings	Soil sample	-	-

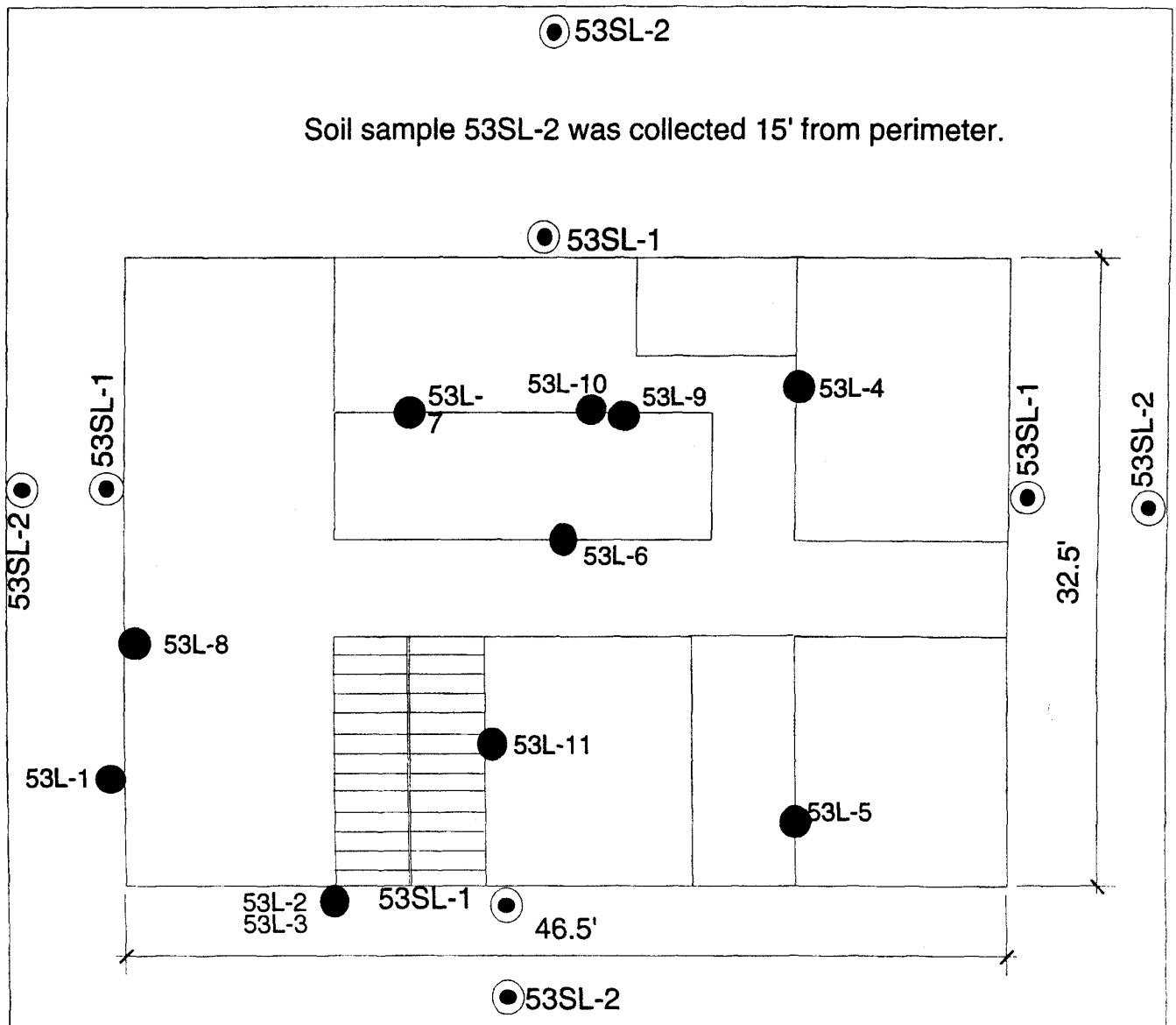
* per building unit

Recommendations

The five vacant buildings should be demolished and disposed of after asbestos is abated. The individual sites should be cleaned up, including removing the top 1 foot of soil around each building perimeter, to a distance of 15 feet. The four remaining occupied buildings should be wet-scraped and encapsulated. The soil should be removed up to a 15-foot perimeter to a depth of 1 foot. Stockpile excavated soils. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead. Excavated soil around occupied units should be replaced and the area should be hydroseeded. Excavated soil area around removed buildings should be regraded and hydroseeded.



Photograph 53: FAA Housing Area



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
◉ -Soil
◒ -Dust

OCCUPIED UNITS
Recommendations:
Wet scape and encapsulate exterior.
Remove soil to a depth of 1',
to 15' from perimeter.
Replace excavated soil and hydroseed.

UNOCCUPIED UNITS
Recommendations:
Demolish buildings.
Remove soil to a depth of 1',
to 15' from perimeter.
Replace excavated soil and hydroseed.

N

0 2.5 5 10

SCALE IN FEET

Site 53 FAA Housing
First Floor Plan

RIDOLFI ENGINEERS

METLAKATLA PENINSULA
LEAD BASED PAINT
INVESTIGATION

Figure 53-1

LBP Sample Locations

4.23 Site 54 Public School

Description

The remains of the public school consist of a Z-shaped concrete foundation, a small concrete boiler room (see photograph 54), metal piping, metal structural steel, and metal building debris. The boiler room contains an insulated boiler and insulated piping. The debris contains vinyl floor tile, miscellaneous boiler debris, pipe insulation, and miscellaneous building debris.

Suspect Materials

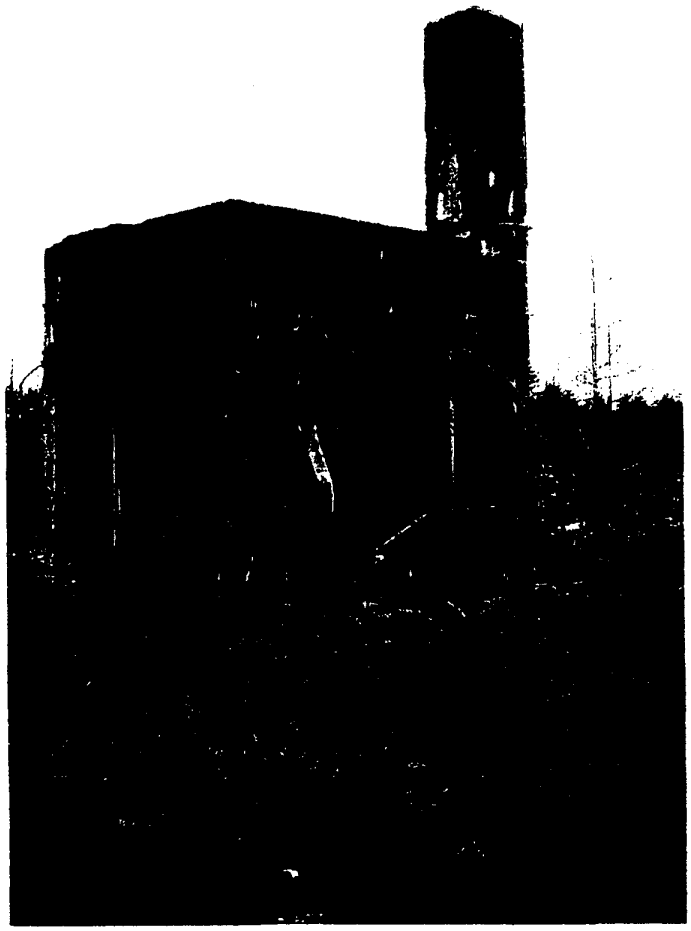
Two paint chip samples were taken from the boiler room. There is no remaining building from which to collect samples. Three soil samples were taken at this site: two at the perimeter driplines of two remaining slabs and one gross composite across the slab areas. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 54-1 for sample locations.

Lead-Based Paint Materials

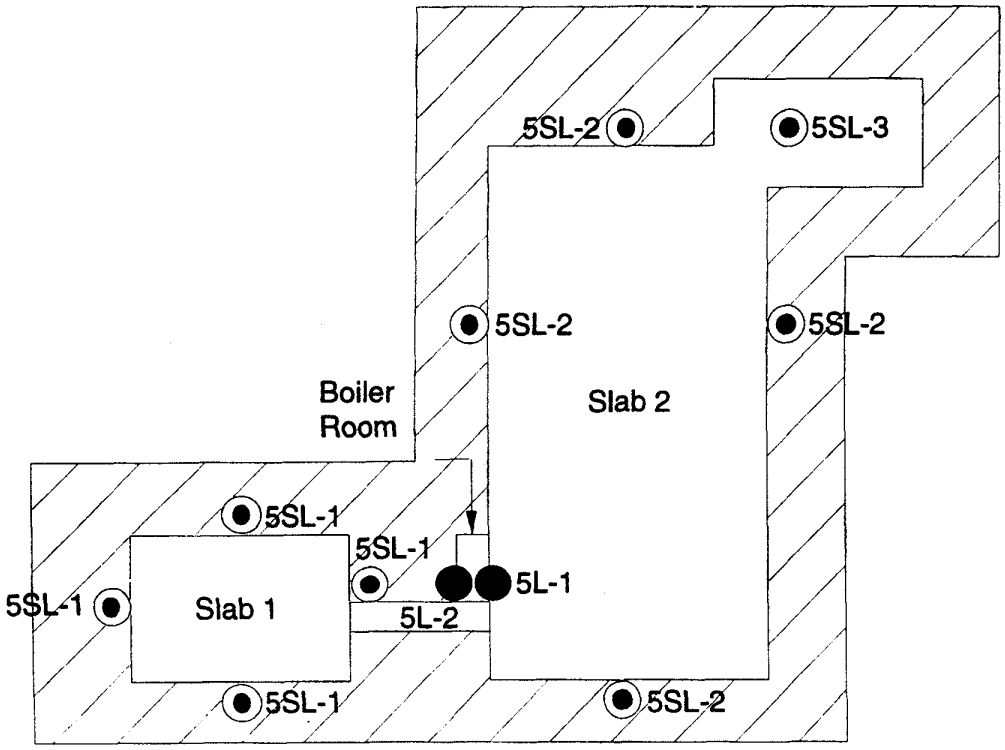
- Perimeter dripline composite of slab #2 (soil sample 54SL-2) contains 540 PPM lead
- Boiler room wall paint sample contains 4,600 PPM lead

Recommendations

This site requires asbestos abatement. One foot of soil, 15 feet out from concrete slab, should be removed after any metal and wood debris is cleared and disposed of. Metal can be stockpiled for salvage. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 54 : Public School



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
◉ -Soil
◒ -Dust

Recommendations:
Remove soil to a depth of 1',
to a distance of 15' from slabs.

N

0 25 50 100

SCALE IN FEET

Site 54 Public School
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 54-1
		LBP Sample Locations

4.24 Site 56 Pacific Northern/Western Airlines (PNA/WA) Apartments

Description

The approximately 35-foot x 85-foot structure (see photograph 56) was formerly an apartment building constructed for PNA/WA employees. It is currently occupied as residences by MIC members. The building is a two-story structure, with a wood and cementitious exterior skirting wall. The current residents have repainted the exterior and are remodeling and repairing the interior.

Suspect Materials

Four paint chip samples and two soil samples were collected at this site. In addition, four dust wipe samples were collected on interior surfaces. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 56-1 for sample locations.

Lead-Based Paint Materials

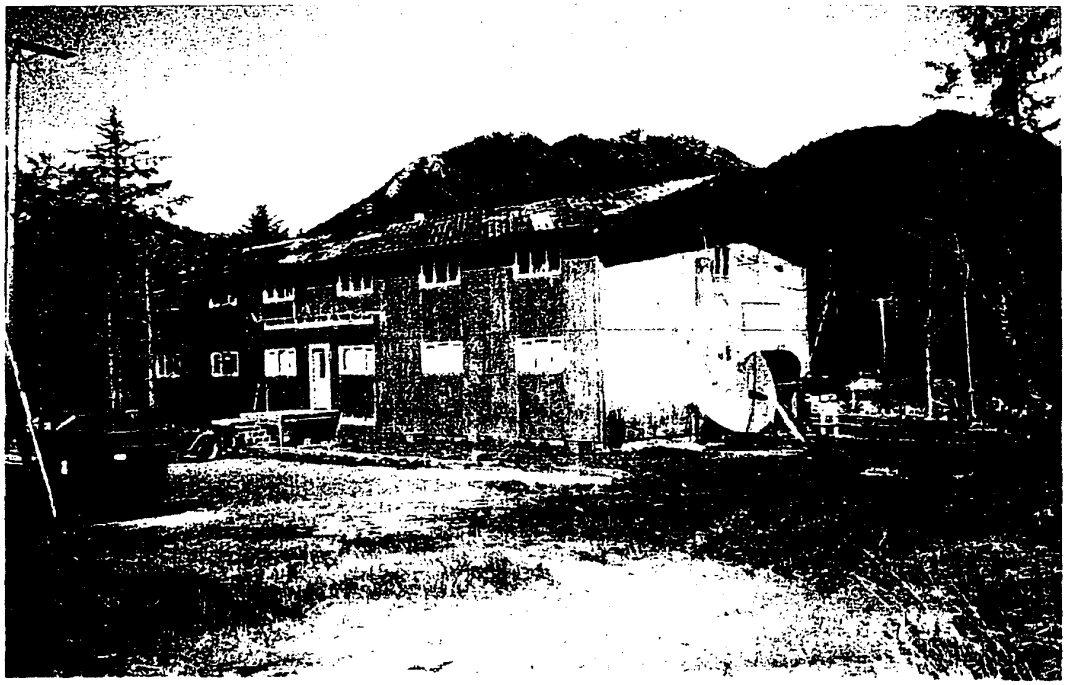
- Older exterior beige pink paint contains 7,000 PPM lead

Summary of LBP Quantities

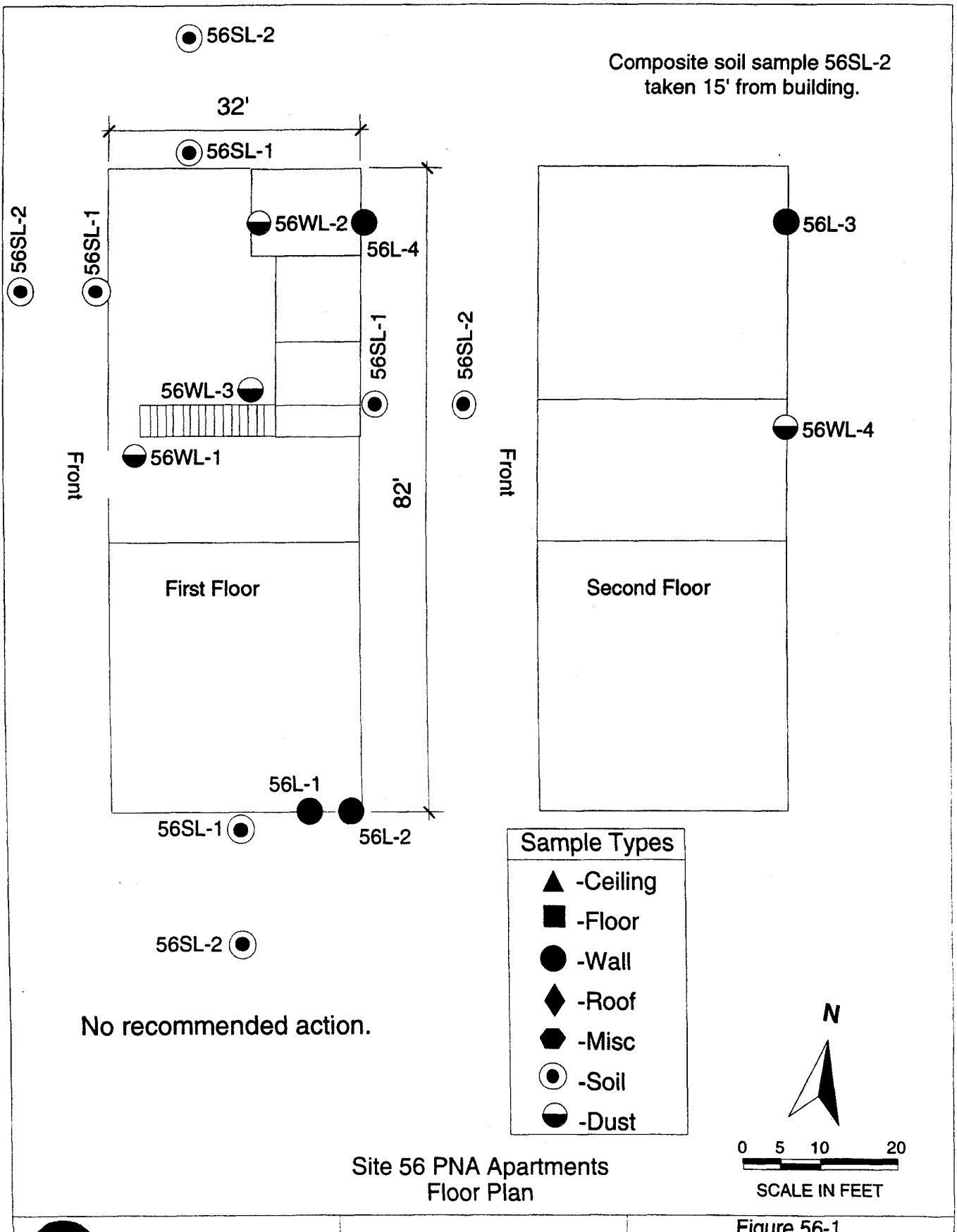
Sample No.	Location	Material Description	Quantity	Unit
56L-2	Exterior	Older exterior beige pink	4,560	SF

Recommendations

Building was repainted in the spring of 1997. Beige pink LBP and dark red lower-level LBP are no longer exposed. No action is recommended.



Photograph 56: PNA/WA Apartments


56SL-2
Composite soil sample 56SL-2
taken 15' from building.
32'
56SL-1
56SL-2
56SL-1
56WL-2
56L-4
56SL-1
56SL-2
56WL-3
56WL-1
Front
82'
First Floor
56L-1
56SL-1
56L-2
56SL-2
56L-3
56WL-4
Front
Second Floor
Sample Types
-Ceiling
-Floor
-Wall
-Roof
-Misc
-Soil
-Dust
N
0 5 10 20
SCALE IN FEET
No recommended action.
Site 56 PNA Apartments
Floor Plan
RIDOLFI ENGINEERS
METLAKATLA PENINSULA
LEAD BASED PAINT
INVESTIGATION
Figure 56-1
LBP Sample Locations

4.25 Site 63 DOD/FAA Remote Receiver Station

Description

The remains of the remote receiver station consist of a single-story, 20-foot x 30-foot concrete block building and a small, faded red-and-white 20-foot tower (see photograph 63). The remains of the small tower are located to the west of the building. The building contains abandoned electronic equipment and vinyl tile flooring. A toppled, faded red-and-white tower is located immediately north of the building. The station pad is bordered by ponded water. The perimeter embankments and nearshore pond areas are littered with what is apparently station-related debris (fuses, electrical conduit, a metal console, and building materials).

Suspect Materials

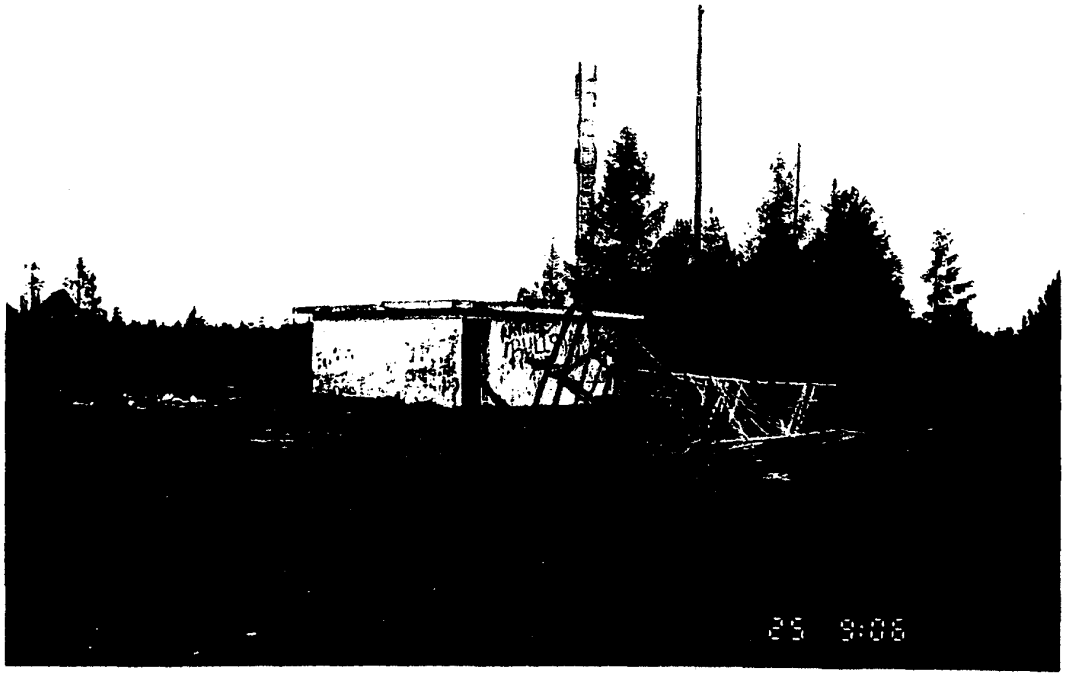
Two paint samples and two soil samples were taken at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 63-1 for sample locations.

Lead-Based Paint Materials

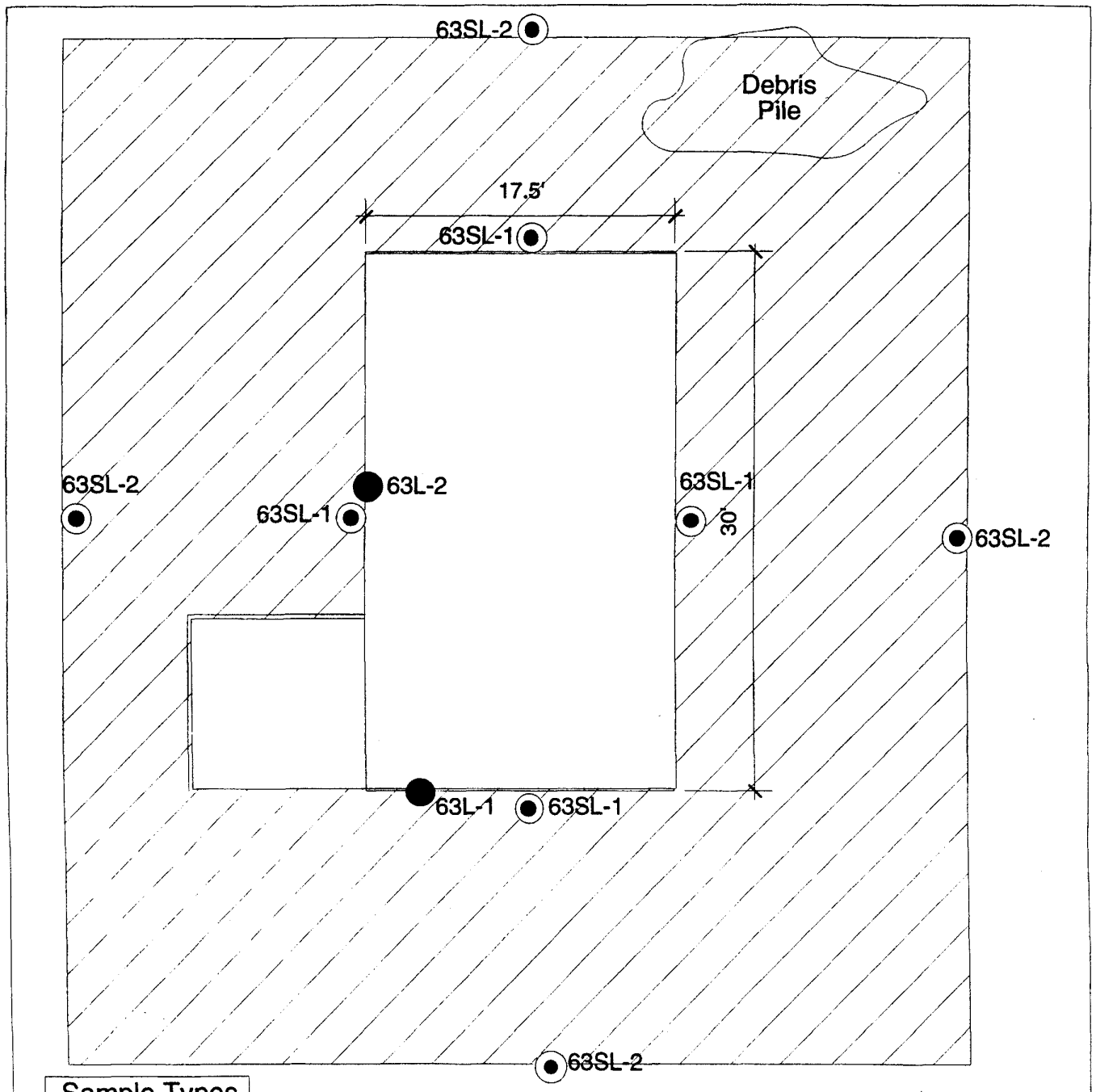
- Dripline soil sample contains 470 PPM lead

Recommendations

Clean up perimeter soil to a distance of 15 feet from building and to a depth of 1 foot. Stockpile excavated soils. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead. Remove tower by the building and those located to the west; stockpile metal for salvage.



Photograph 63: Remote Receiver Station



Sample Types

- ▲ -Ceiling
- ■ -Floor
- ● -Wall
- ♦ -Roof
- ⬢ -Misc
- ◉ -Soil

Recommendations:
Remove towers.
Remove soil to a depth of 1',
to a distance of 15' from building

N

0 5 10 15

SCALE IN FEET

Site 63 Remote Receiver Station
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 63-1
		LBP Sample Locations

4.26 Site 67 Weather Bureau Station

Description

The weather station contains two main structures: a 20-foot x 40-foot single story, wood-frame office building with an attached 20-foot x 20-foot storage building. A 20-foot x 30-foot, domed, wood-frame weather balloon release building and a smaller domed building (see photograph 67) are located on site, with other weather instrumentation nearby.

Suspect Materials

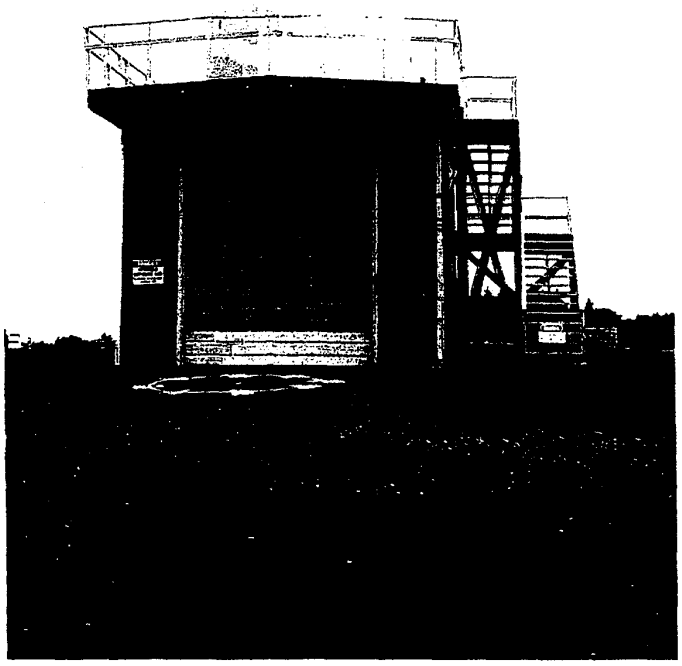
Five paint chip and two soil samples were taken at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 67-1 for sample locations.

Lead-Based Paint Materials

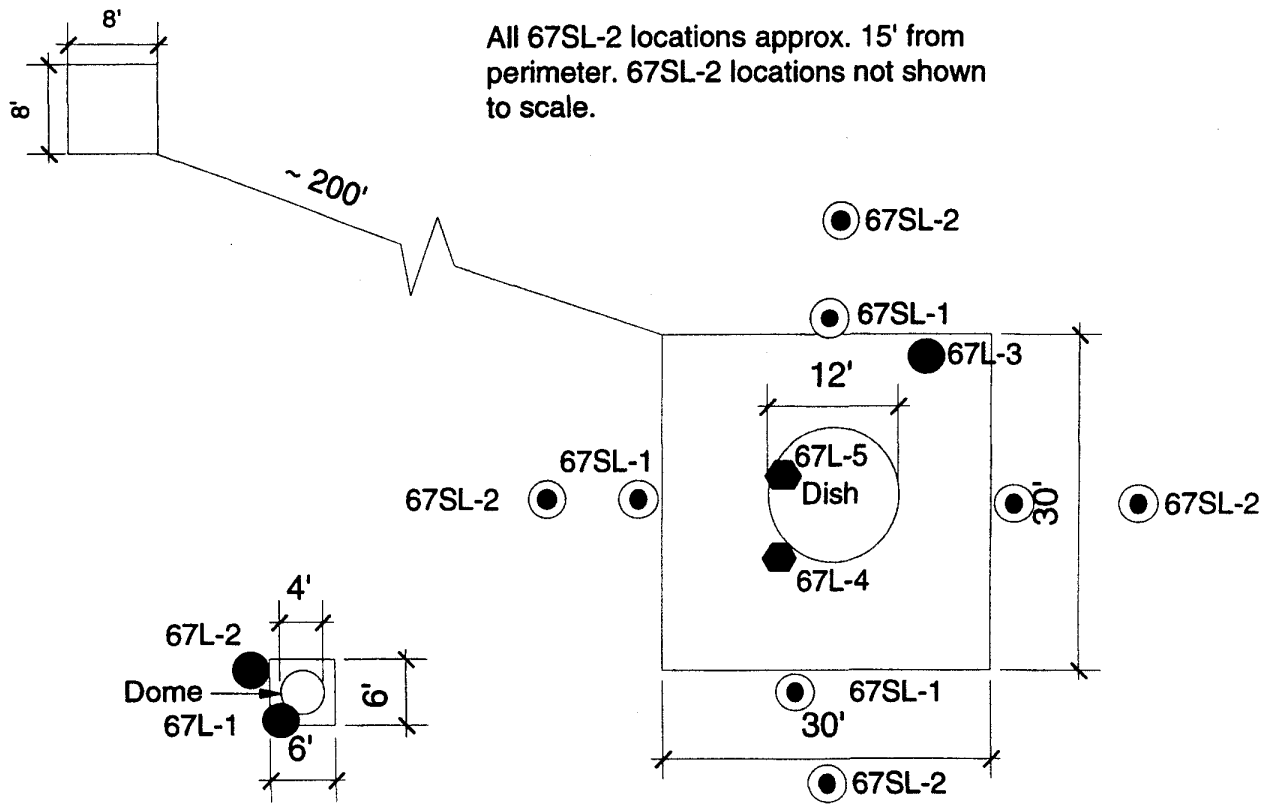
None of the paints sampled contained more than 5,000 PPM lead. Soil samples contained less than 1,000 PPM lead.

Recommendations

No action is recommended.



Photograph 67: Weather Bureau Station



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
◆ -Roof
⬣ -Misc
◉ -Soil
◒ -Dust

No LBP found.
No recommended action.

Site 67 Weather Bureau Station

N

0 5 10 20

SCALE IN FEET

RIDOLFI ENGINEERS

METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION

Figure 67-1

LBP Sample Locations

4.27 Site 69 USCG Quarters

Description

The remains of the Coast Guard quarters consist of a two-story, T-shaped building that is divided into individual living units and shared lavatories. The building has a boiler room containing an insulated boiler, water tank and piping, vinyl tile flooring, and cementitious exterior siding. In 1997, a local entity started dismantling the structure (see photograph 69). The building is currently flagged as an Asbestos Hazard Area.

Suspect Materials

Nine paint chip and two soil samples were collected at this site. Samples included seven interior paints from the living areas and two from the boiler room. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 69-1 for sample locations.

Lead-Based Paint Materials

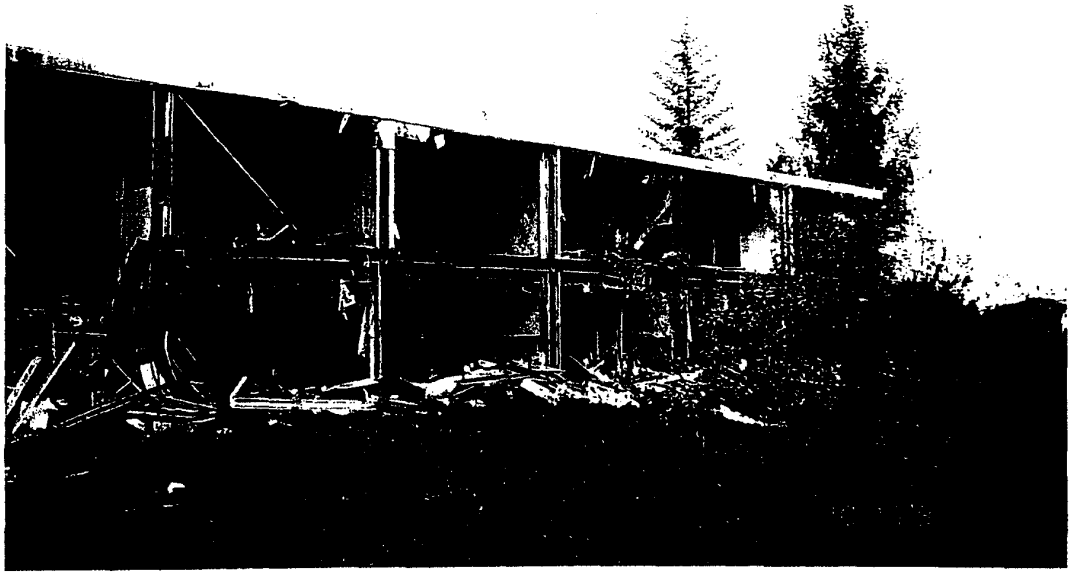
- Blue kitchen paint was just below 5,000 PPM (4,600 PPM) lead
- Cream wall paint from hallways contains 19,000 PPM lead
- Soil sample taken 15 feet from perimeter contains 3,700 PPM lead

Summary of LBP Quantities

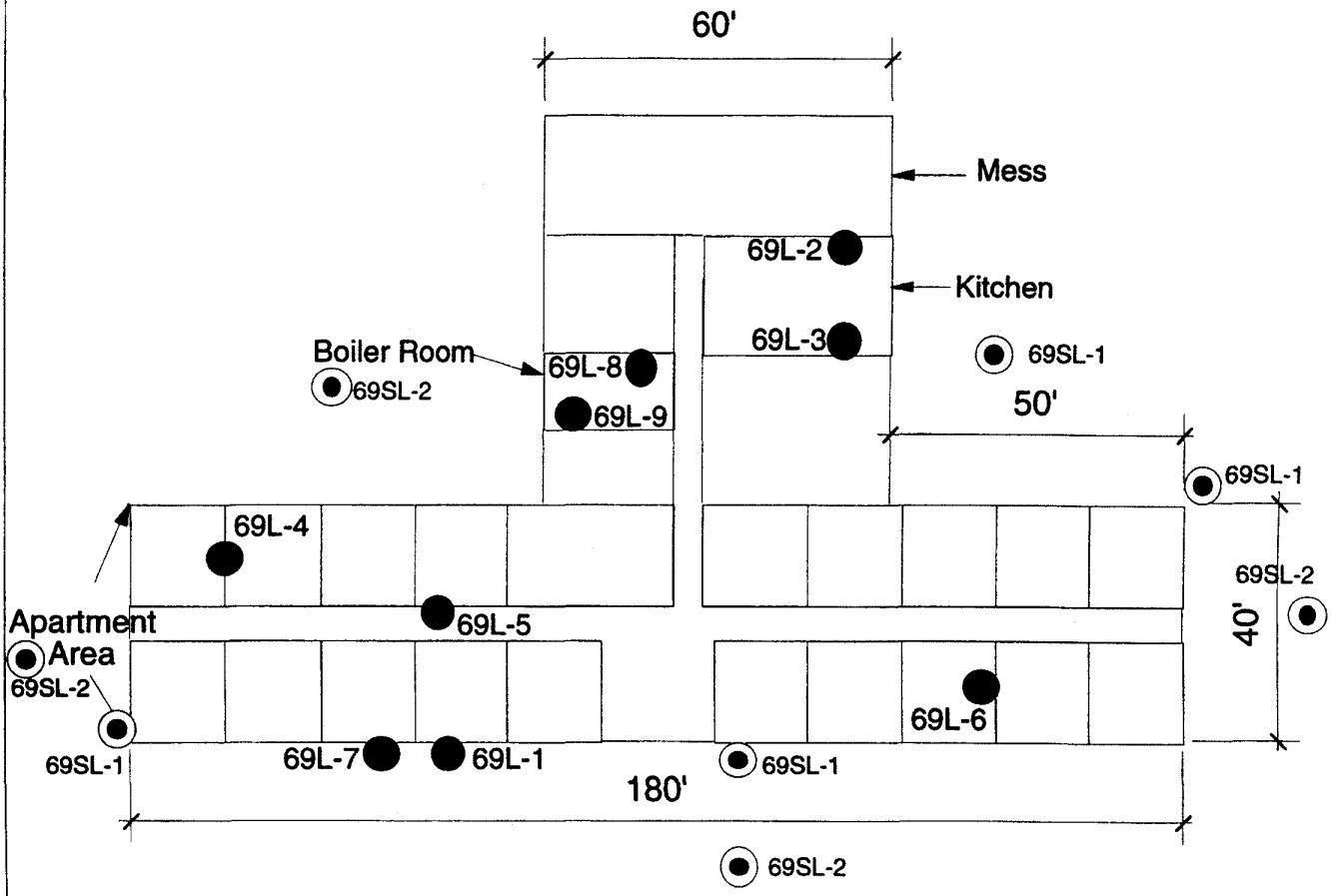
Sample No.	Location	Material Description	Quantity	Unit
69L-5	Hallways	Cream wall paint	25,000	SF
69L-3	Kitchen	Blue wall paint	3,125	SF

Recommendations

Remove soil from the dripline perimeter to 15 feet out, down to a depth of 1 foot. Stockpile excavated soil. The hallway gypsum board will be removed under an ACM action, thus also removing the paint that contains 19,000 PPM lead. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead.



Photograph 69: USCG Quarters



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬢ -Misc
◉ -Soil
◒ -Dust

Recommendations:
Remove soil to a depth of 1', to a distance of 15' from the building perimeter.

N

0 30 60

SCALE IN FEET

Site 69 USCG Quarters
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 69-1 LBP Sample Locations

4.28 Site 70 DOD Beacon Tower

Description

The remainder of the DOD beacon is an approximately 70-foot, faded, red-and-white metal tower (see photograph 70).

Suspect Materials

One paint chip and one soil sample were taken at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 70-1 for sample locations.

Lead-Based Paint Materials

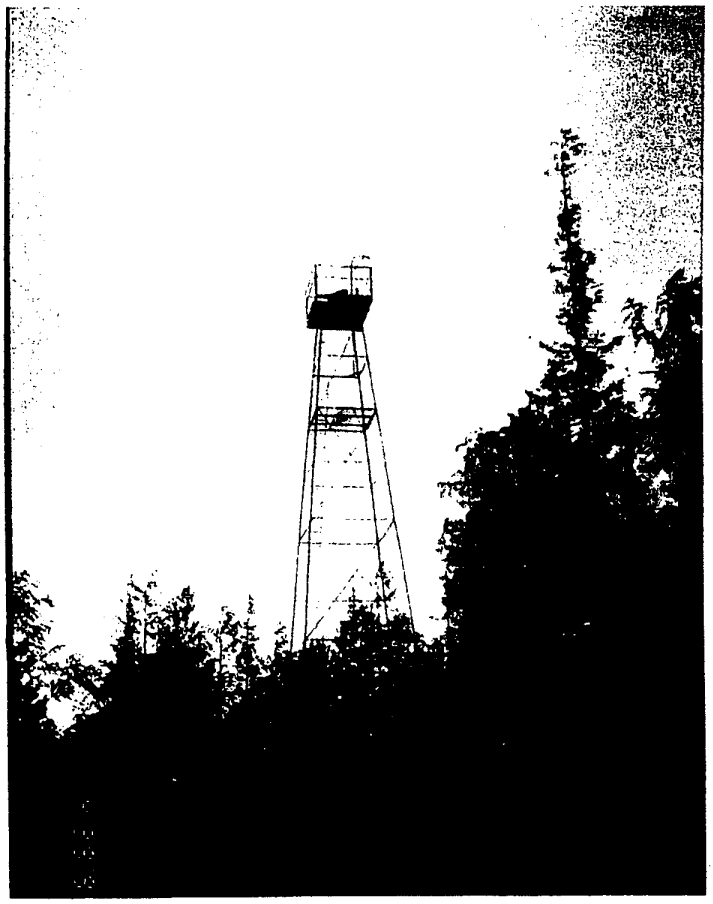
- Faded red tower paint contains 500,000 PPM lead

Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
70L-1	Tower	Faded red tower paint	500	SF

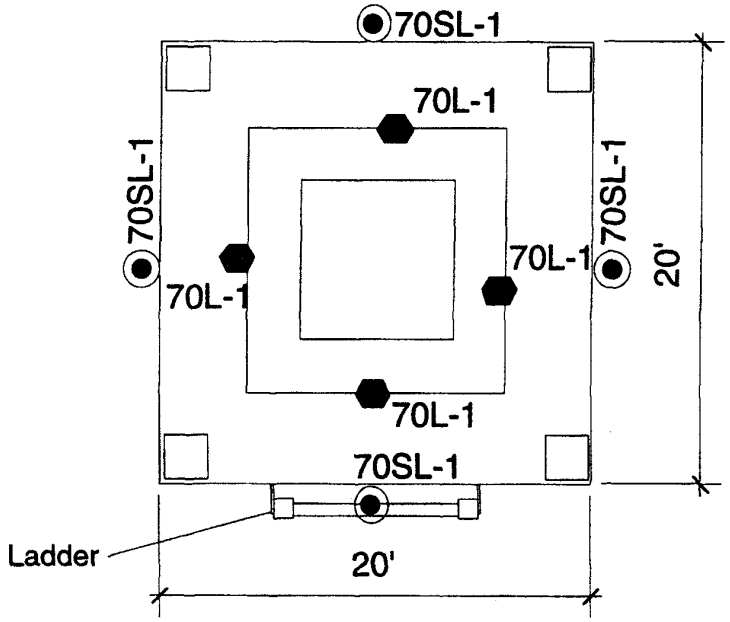
Recommendations

Remove LBP mechanically with a needle gun. Repaint with non-lead-based paint.



Photograph 70: Beacon Tower

Recommendations:
Remove Lead Based Paint and repaint tower.



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬣ -Misc
◉ -Soil
◒ -Dust

N

0 2.5 5 10
SCALE IN FEET

Site 70 Beacon Tower

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 70-1 LBP Sample Locations

4.29 Site 72 Hangar Boiler Building

Description

The boiler building (see photograph 72) is approximately 30-feet x 25-feet x 18-feet and contains two insulated boilers and associated insulated piping.

Suspect Materials

Four paint chip and two soil samples were collected from this site. Sample 72L-1 was a composite of white interior and exterior paint. Sample 72L-2 was a composite of interior and exterior door paint. Composites were taken because the paint colors were the same inside and outside. The other two paint samples were interior paints. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 72-1 for sample locations.

Lead-Based Paint Materials

- Green/gray door paint contains 10,000 PPM lead
- Blue/gray interior wall paint contains 5,100 PPM lead

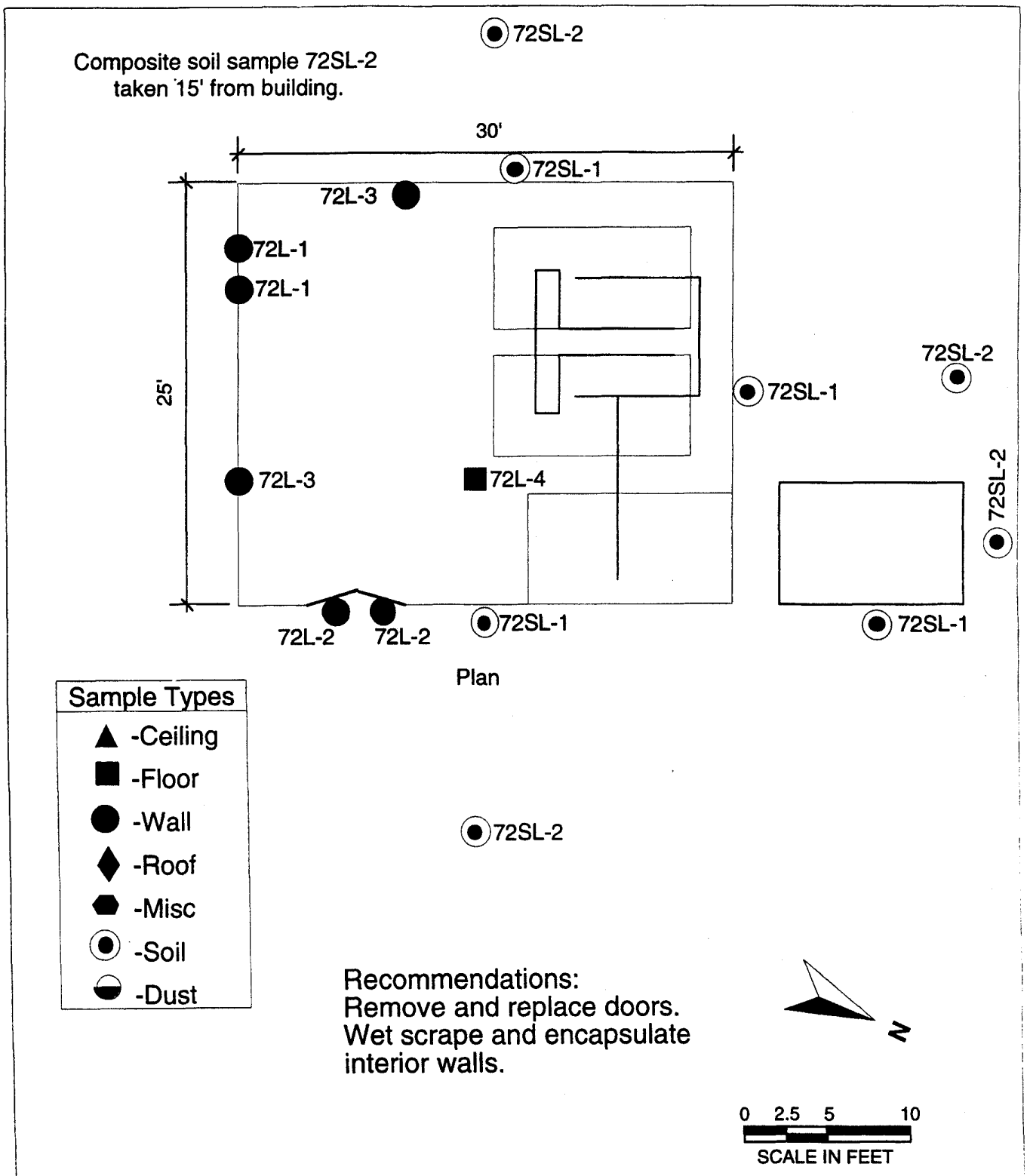
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
72L-2	Doors	Green/gray door	128	SF
72L-3	Interior Walls	Blue/gray interior wall paint	962	SF

Recommendations

Wet-scrape and encapsulate interior blue/gray wall surfaces. Remove and replace doors. Perform actions after asbestos abatement.

Photograph 72: Hangar Boiler Building



Site 72 Hangar Boiler Bldg.

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 72-1
		LBP Sample Locations

4.30 Site 73 Boiler Building AST

Description

One 4,000-gallon AST is located south of the hangar boiler building (see photograph 73). The tank supplied fuel to the boilers in the adjacent building.

Suspect Materials

One paint chip and two soil samples were taken. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 73-1 for sample locations.

Lead-Based Paint Materials

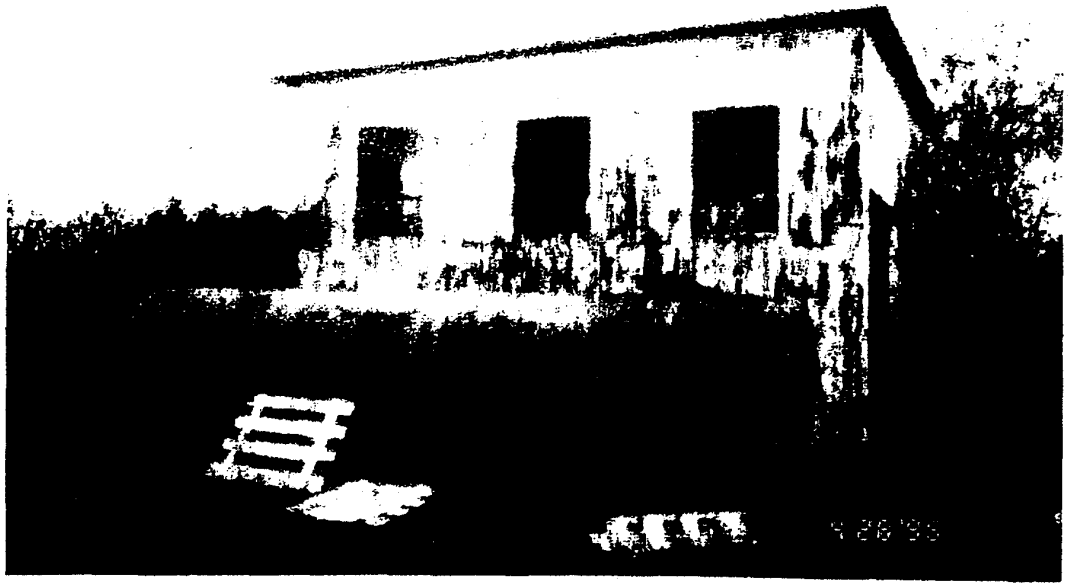
- Green surface paint on tanks contains 46,000 PPM lead

Summary of LBP Quantities

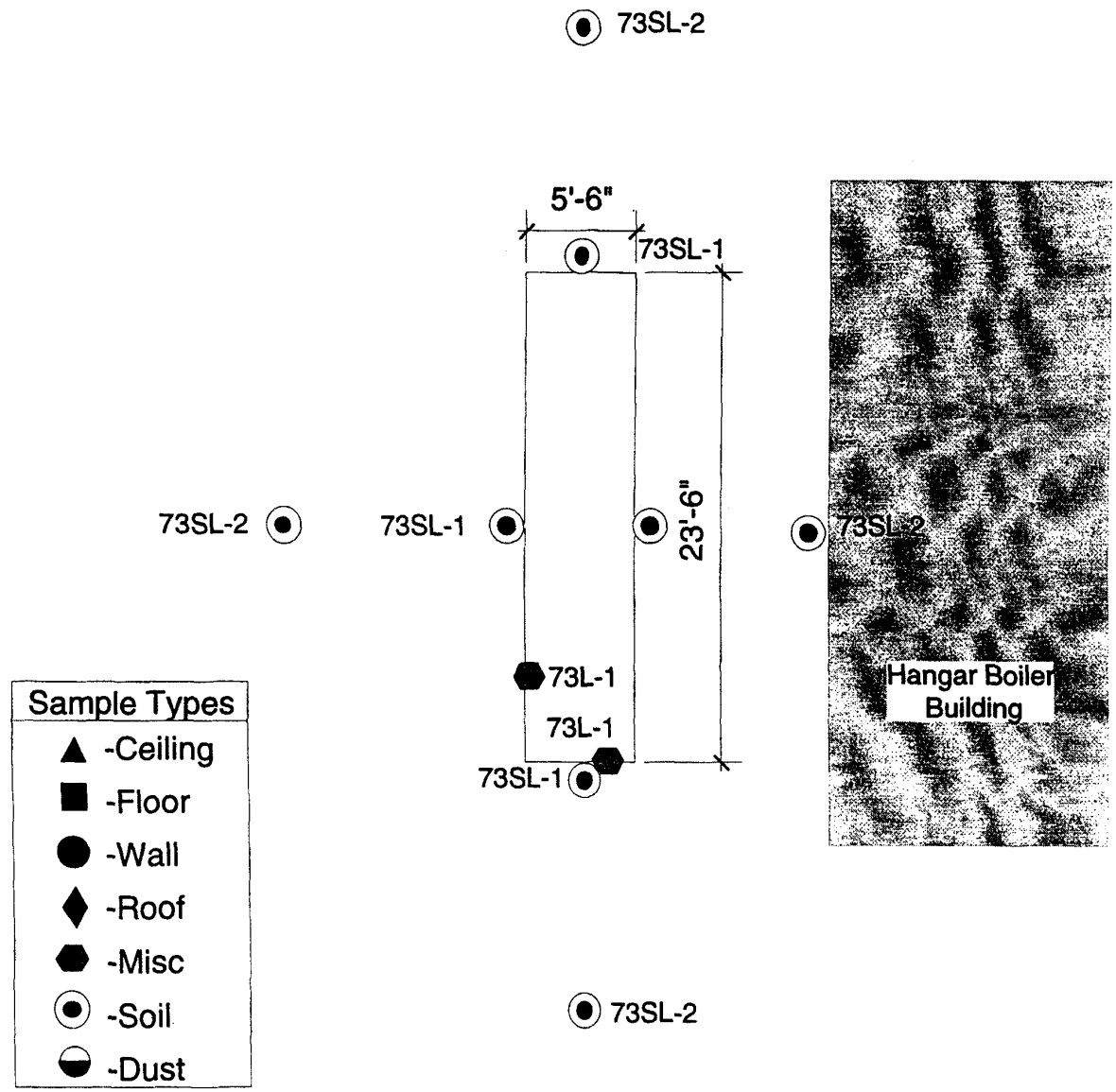
Sample No.	Location	Material Description	Quantity	Unit
73L-1	Tank	Green surface paint	406	SF

Recommendations

Remove AST and cribbing/supports. Clean, cut up, and recycle the tank. Remove soil in the top 1 foot within a 15-foot radius of AST. This soil is petroleum-contaminated and should be disposed of instead of stockpiled.



Photograph 73: Boiler Building AST



Recommendations:
Clean, dismantle and remove AST for salvage.
Excavate and remove lead-contaminated soil to 1' depth, to a distance of 15'.

N

0 2.5 5 10

SCALE IN FEET

Site 73 Boiler Building AST

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 73-1
		LBP Sample Locations

4.31 Site 74 USCG ASTs

Description

The USCG ASTs are two 10,000-gallon tanks with a fuel loading swing nozzle positioned on elevated metal tank stands (see photograph 74). The ASTs stored fuel used in USCG flight operations.

Suspect Materials

Two paint chips and two soil samples were taken. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 74-1 for sample locations.

Lead-Based Paint Materials

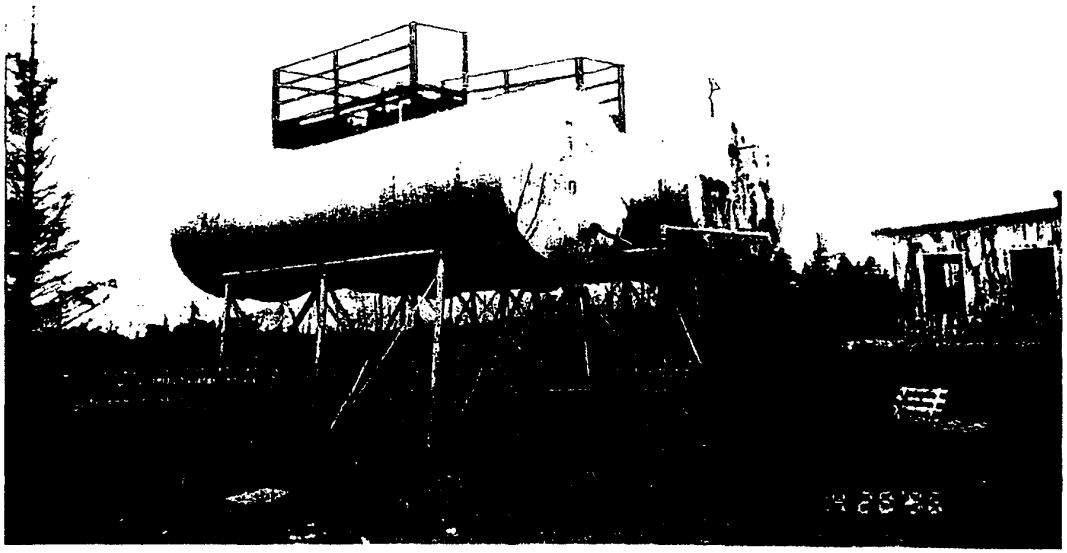
- Silver surface paint on tank structures averages 94,000 PPM lead

Summary of LBP Quantities

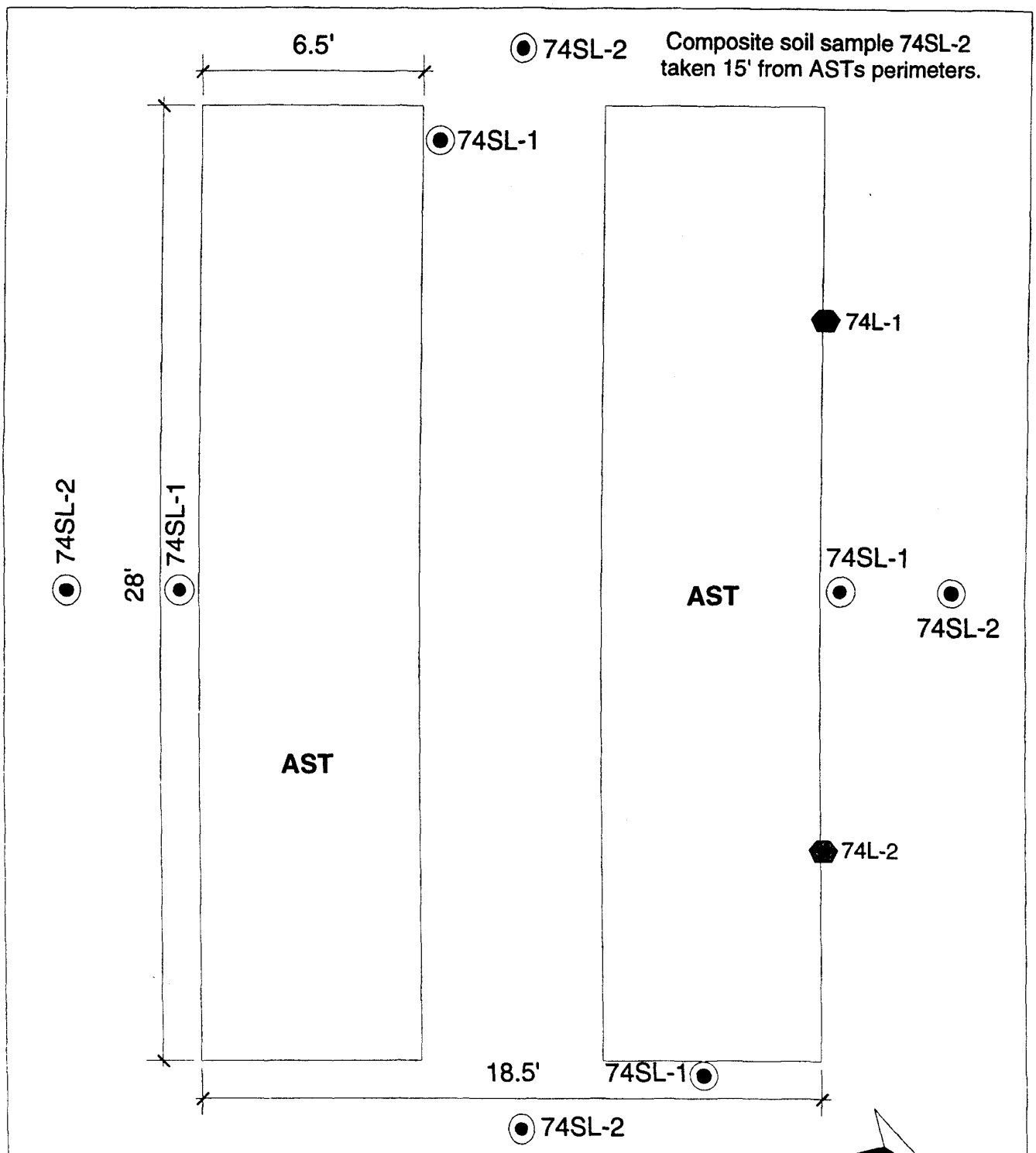
Sample No.	Location	Material Description	Quantity	Unit
74L-1 & -2	Tanks	Silver surface paint	1,145	SF

Recommendations

Remove AST and cribbing/supports. Clean, cut up, and recycle tanks. Remove soil in the top 1 foot within a 15-foot radius of the ASTs. This soil is petroleum-contaminated and should be disposed of instead of stockpiled.



Photograph 74: USCG ASTs



Sample Types

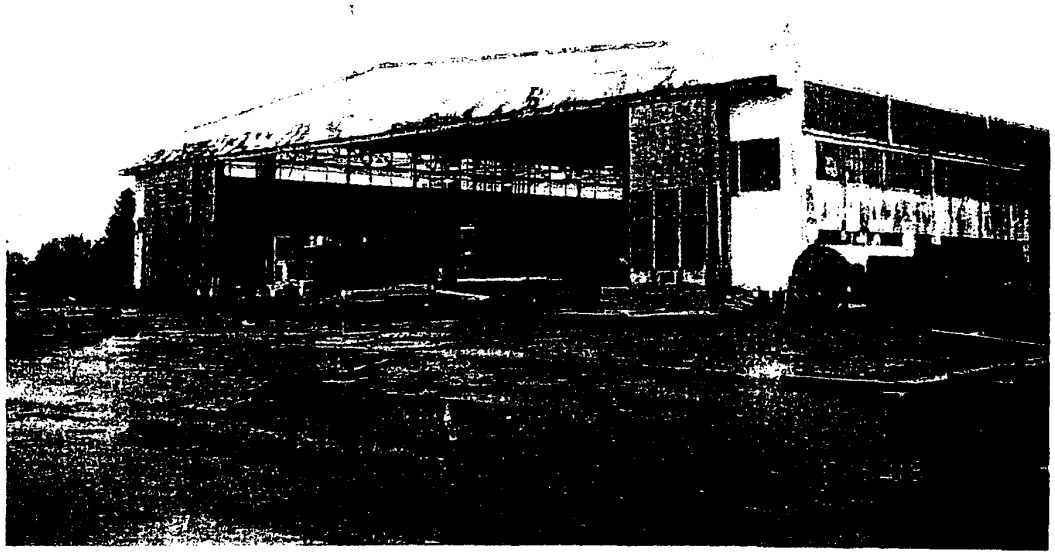
-Misc

-Soil

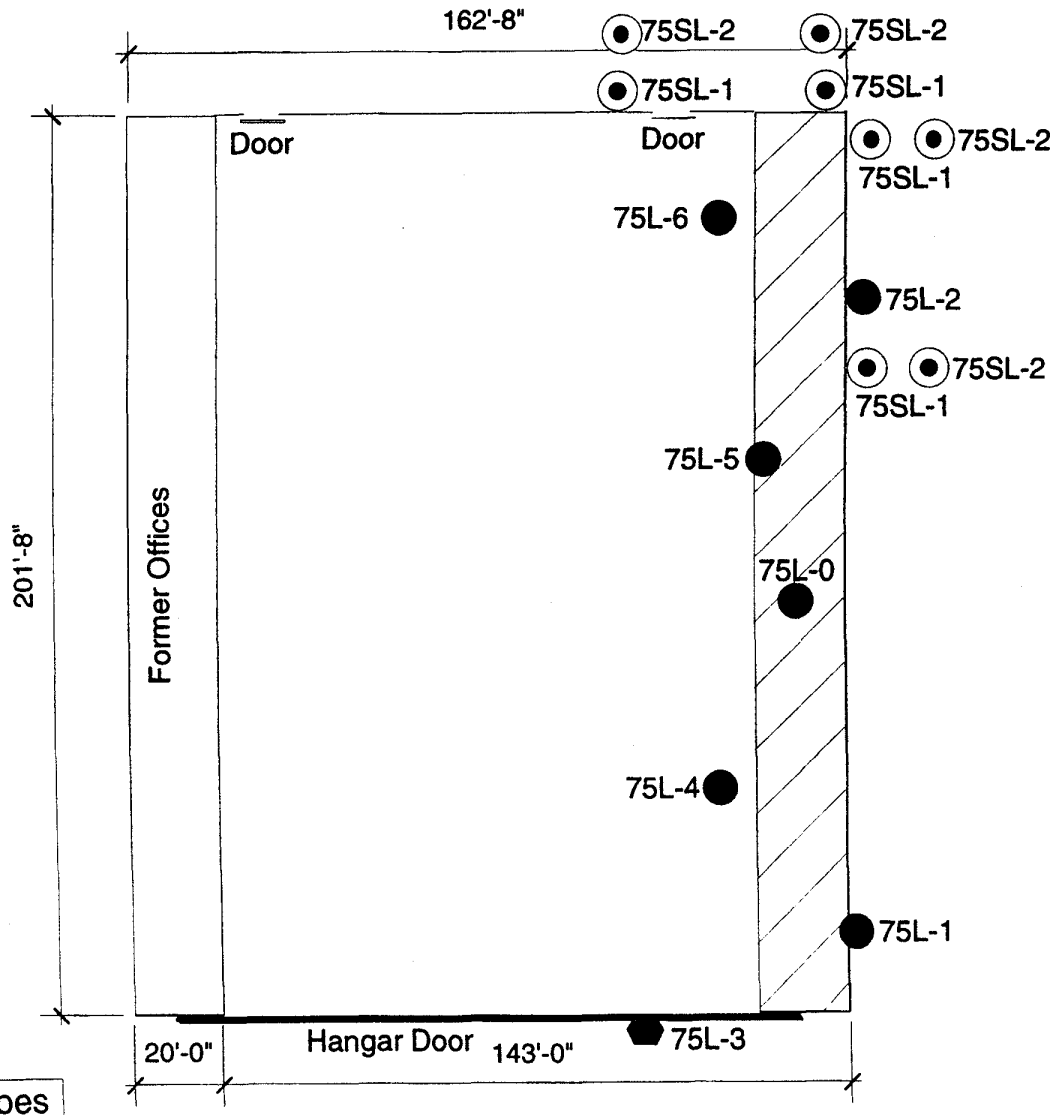
Recommendations:
Clean, dismantle and remove ASTs for salvage.
Excavate and remove lead-contaminated soil to 1' foot depth, to a distance of 15'.

Site 74 USCG AST's

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 74-1 LBP Sample Locations



Photograph 75: Hangar



Sample Types

- ▲ -Ceiling
- ■ -Floor
- ● -Wall
- ♦ -Roof
- ⬣ -Misc
- ⊙ -Soil
- ◒ -Dust

Recommendations:
Remove LBP and repaint main doors.
Remove painted fiber board.

Fiber board area
Main doors

Site 75 Hangar Floor Plan

N

0 20 40 80

SCALE IN FEET

RIDOLFI ENGINEERS

METLAKATLA PENINSULA
LEAD BASED PAINT
INVESTIGATION

Figure 75-1

LBP Sample Locations

4.33 Site 77 Pacific Northern/Western Airlines (PNA/WA) Terminal

Description

The PNA/WA airline terminal was a 40-foot x 100-foot, single story, wood-frame building. The building had a garage (eastern 5 percent of building) and a former combined passenger lounge and food service and ticketing areas. The terminal building was destroyed by fire (see photograph 77).

Suspect Materials

One paint chip sample was collected of the exterior paint. Two soil samples were collected at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 77-1 for sample locations.

Lead-Based Paint Materials

- Exterior red paint contains 14,000 PPM lead

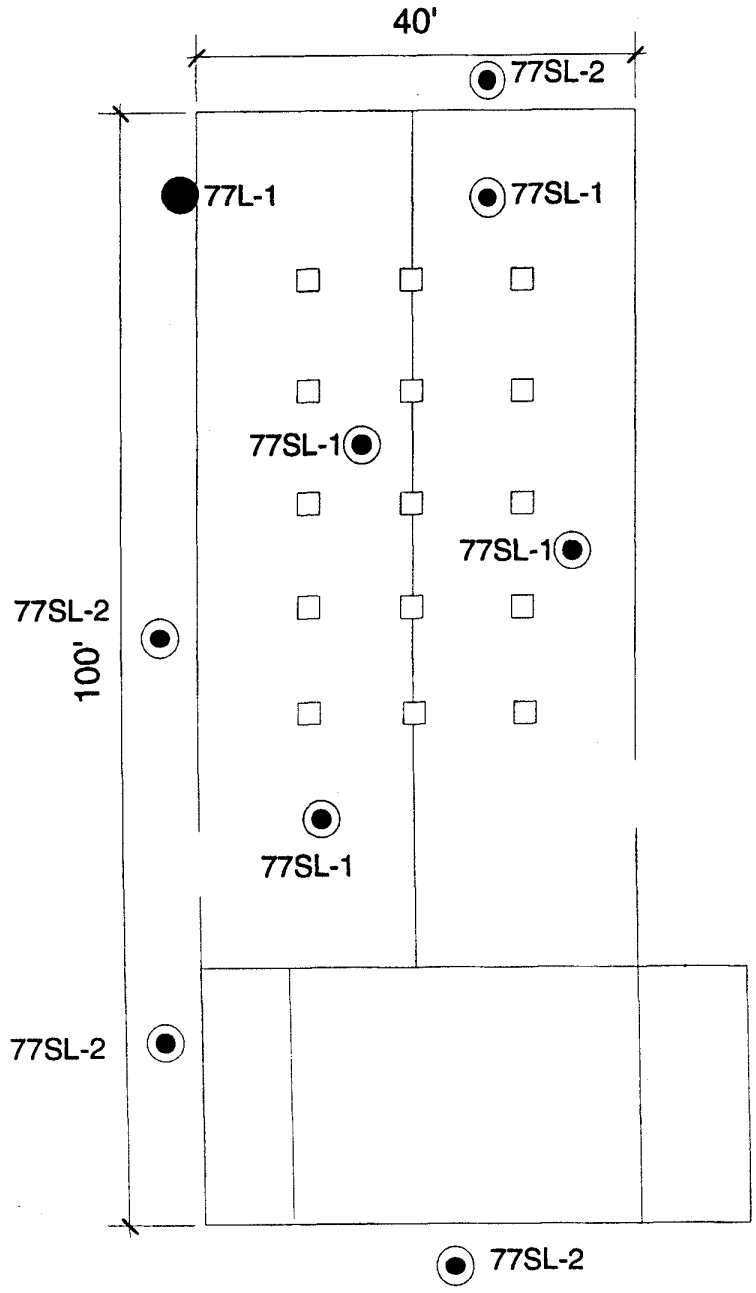
Summary of LBP Quantities

Sample No.	Location	Material Description	Quantity	Unit
77L-1	Exterior	Exterior red paint	2,600	SF

Recommendations

Most of the building lies in debris piles near the building foundation. Remove and dispose of this material after asbestos is abated. Stockpile and salvage metal.

Photograph 77: PNA/WA Terminal



Recommendations:
Remove painted debris from site.

Site 77 PNA/WA Terminal
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 77-1 LBP Sample Locations

4.34 Site 78 DOD Air Traffic Control Tower

Description

The remains of the air traffic control tower consist of an approximately 60-foot, faded, red-and-white steel tower with a catwalk near its apex (see photograph 78). A 20-foot x 20-foot x 10-foot tall tower building (control room) is on the north side of the tower and adjacent to it. The building/control room has burned down.

Suspect Materials

Two paint chip samples and one soil sample were taken at this site. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 78-1 for sample locations.

Lead-Based Paint Materials

- Red structure paint contains 430,000 PPM lead
- White structure paint contains 190,000 PPM lead

Summary of LBP Quantities

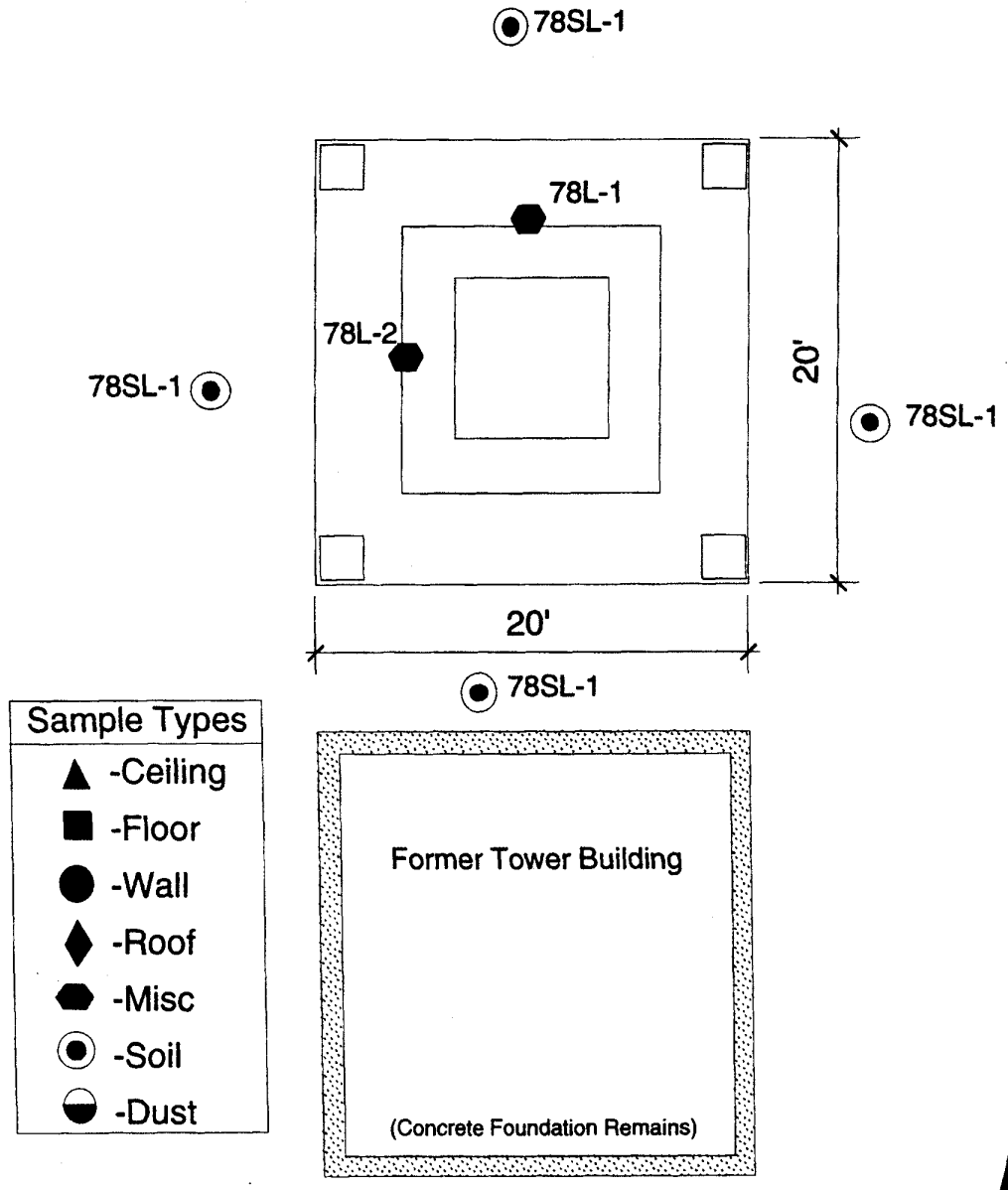
Sample No.	Location	Material Description	Quantity	Unit
78L-1	Tower/Tower Bldg	Faded red structure paint	750	SF
78L-2	Tower/Tower Bldg	White structure paint	1,500	SF

Recommendations

Mechanically remove LBP from the tower and repaint with non-LBP. Remove and demolish the remains of the control room building adjacent to and north of the control tower. Perform confirmation sampling of soil to ensure that soil remaining after the remedial action is below the cleanup level for lead. Removal could potentially precipitate LBP to surrounding soils.

Photograph 78: Air Traffic Control Tower

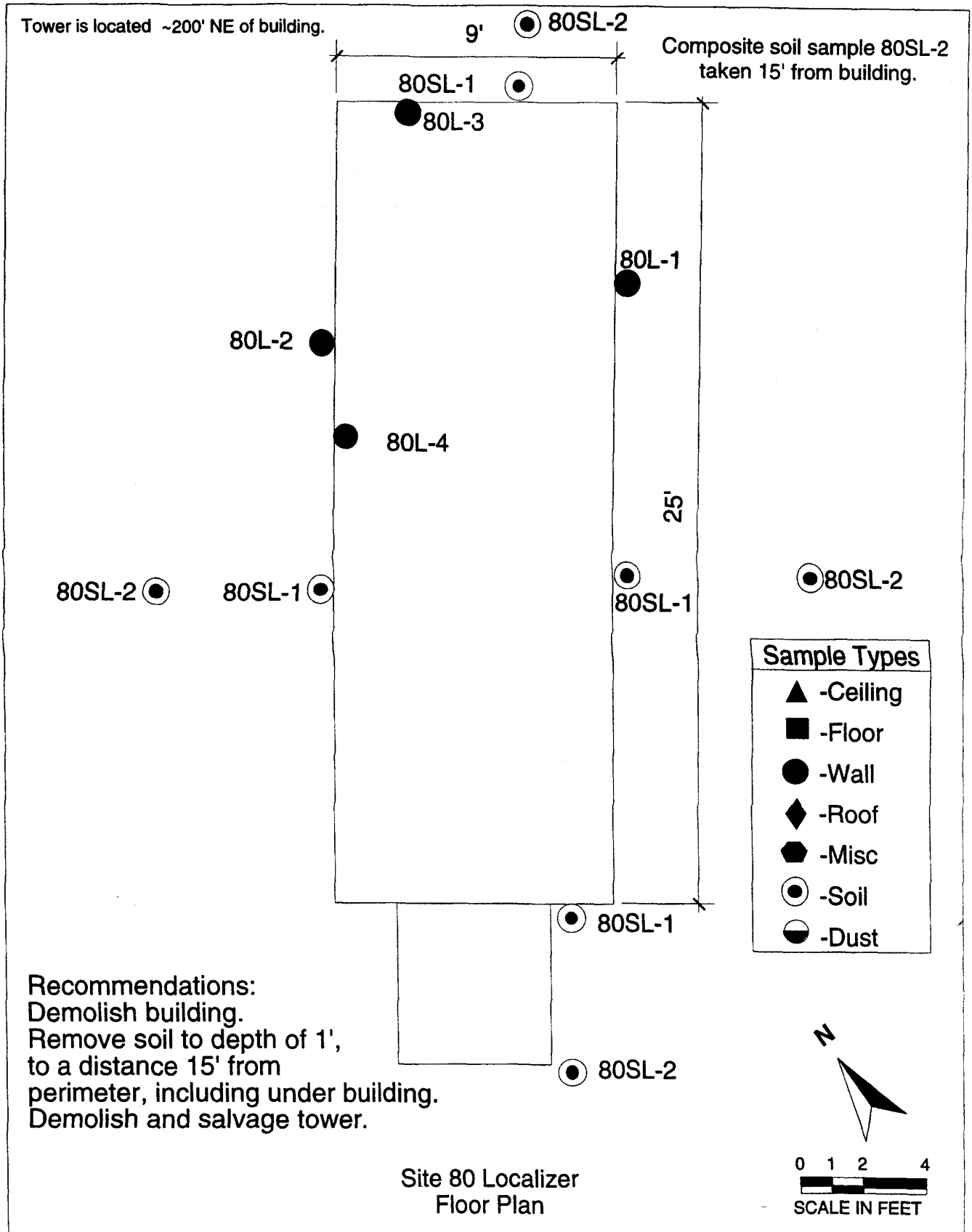
Recommendations:
Remove Lead Based Paint and repaint structure.



Site 78 Air Traffic Control Tower

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 78-1 LBP Sample Locations

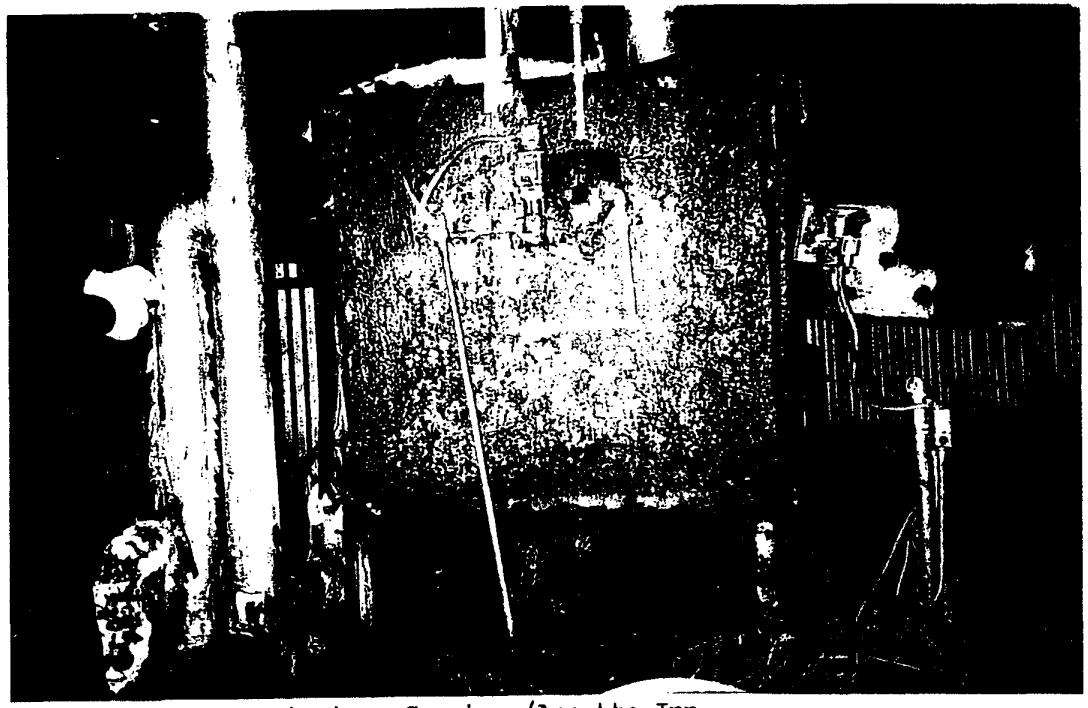
Photograph 80: Localizer



Site 80 Localizer
Floor Plan

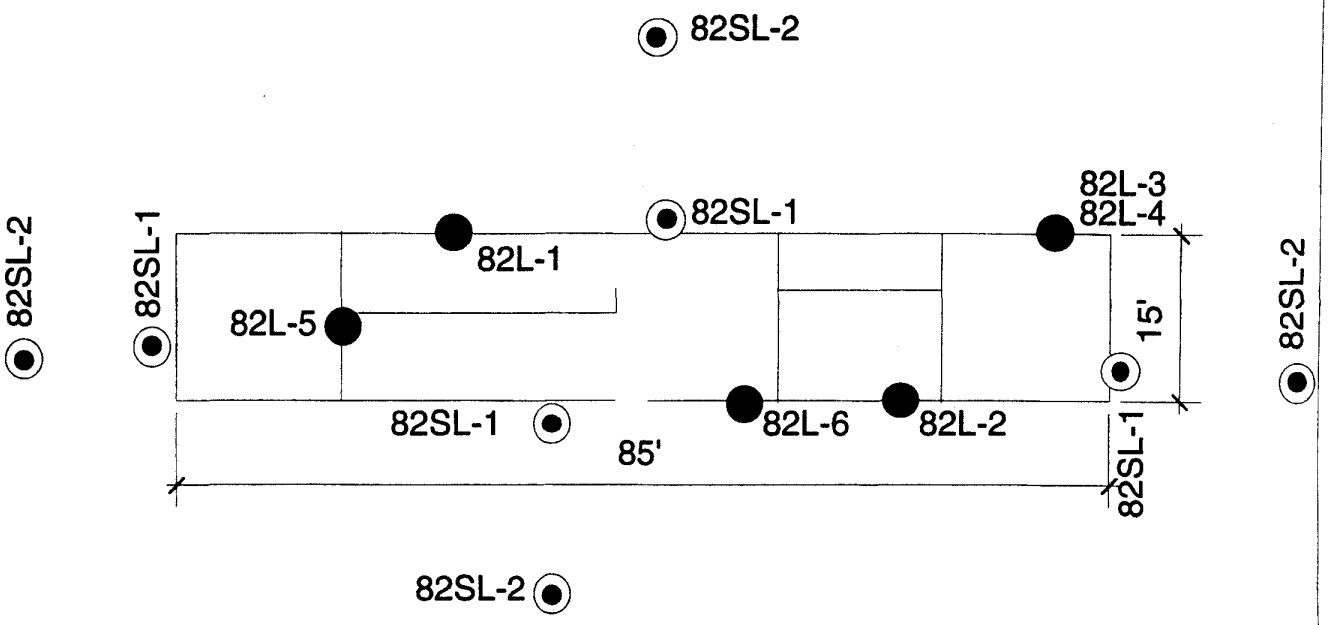
RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 80-1 LBP Sample Locations

Photograph 82a: Winnipeg Garrison/Annette Inn



Photograph 82b: Winnipeg Garrison/Annette Inn

Composite sample 82SL-2 was taken 15' from building perimeter.



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬟ -Misc
◉ -Soil
◒ -Dust

Recommendations:
Demolish structures.
Remove soil to depth of 1',
to 15' out from each building,
including area under buildings.

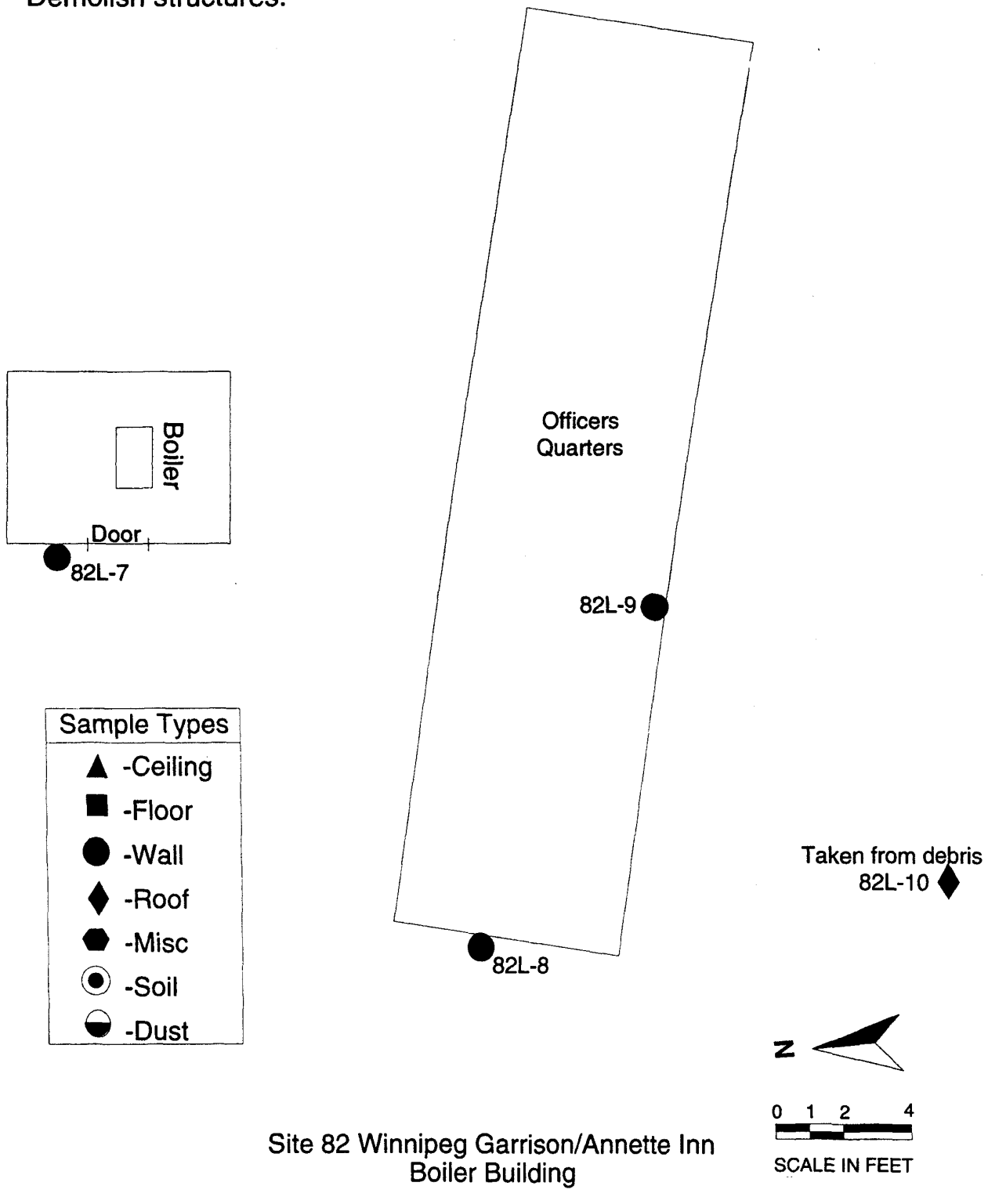
N

0 5 10 20
SCALE IN FEET

Site 82 Winnipeg Garrison/Annette Inn
Floor Plan

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 82-1
		LBP Sample Locations

Recommendations:
Demolish structures.



Site 82 Winnipeg Garrison/Annette Inn
Boiler Building

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 82-2 LBP Sample Locations

4.37 Site 85 Tropospheric Relay Station

Description

The remains of the tropospheric relay station consist of a 70-foot x 30-foot x 15-foot cement block building (see photograph 85a), two 65-foot wide and 60-foot tall antennas (see photograph 85b), a 30-foot cylindrical tower in front of each antenna, a small 11-foot x 13-foot emergency generator building, small wood-frame buildings, small metal buildings, numerous concrete foundations (indicating the former presence of a residential living quarters area), and miscellaneous debris, including sections of a faded red-and-white antenna tower. The station was thought to have been another U. S. Air Force White Alice Station. In the early 1970s, operation of the facility was turned over to General Telephone Company of Alaska.

Suspect Materials

Six paint chip samples and two soil samples were collected from this site. One exterior and two interior paint chip samples were taken from the main building. Paint chip samples were also collected from the towers and footings and from the electrical raceway structure. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 85-1 for sample locations.

Lead-Based Paint Materials

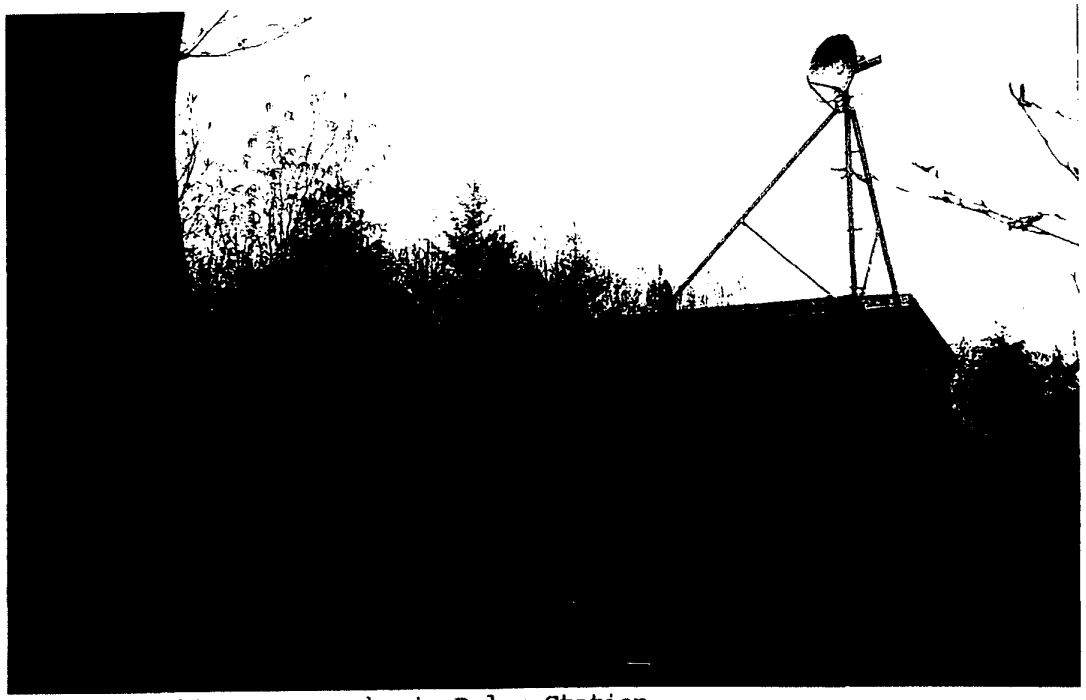
- Interior pipe paint contains 55,000 PPM lead
- Electrical raceway paint contains 39,000 PPM lead
- Tower footing paint contains 12,000 PPM lead

Summary of LBP Quantities

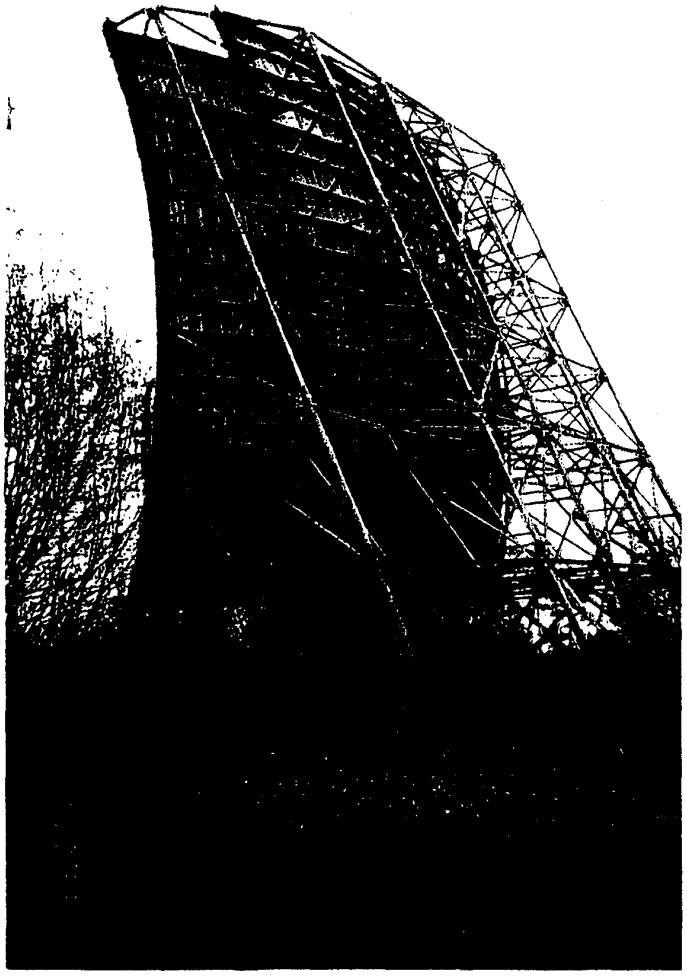
Sample No.	Location	Material Description	Quantity	Unit
85L-2	Interior	Interior pipe paint	20	SF
85L-4	Raceway	Electrical raceway paint	1,960	SF
85L-5	Footing	Tower footing paint	96	SF

Recommendations

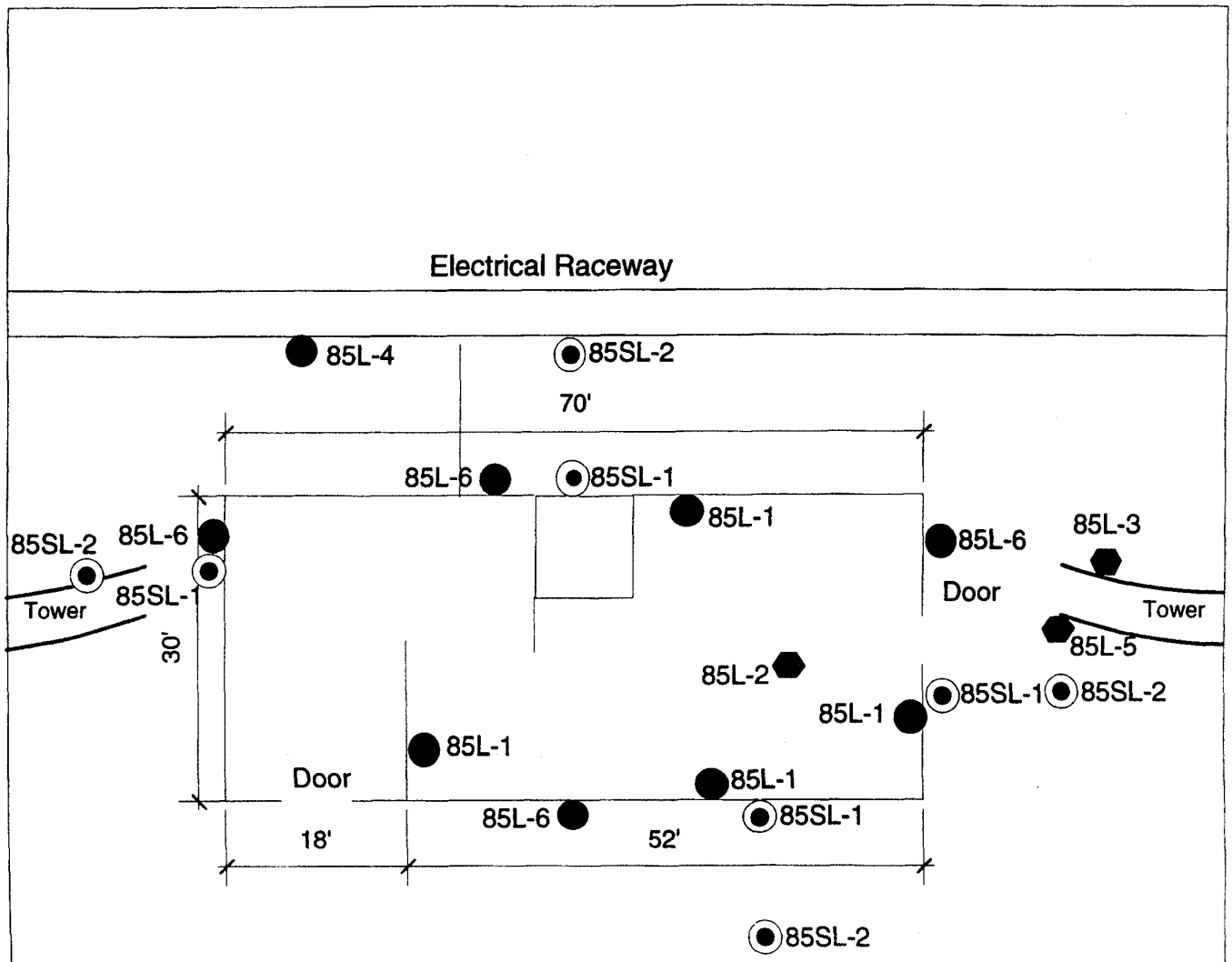
Remove pipe from interior. Remove and dispose of raceway wood structure. Remove LBP from footings and seal with non-LBP. Salvage section of faded red-and-white tower. See Figure 85-2 for a depiction of the abatement plan.



Photograph 85a: Tropospheric Relay Station



Photograph 85b: Tropospheric Relay Station



Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬣ -Misc
◉ -Soil
◒ -Dust

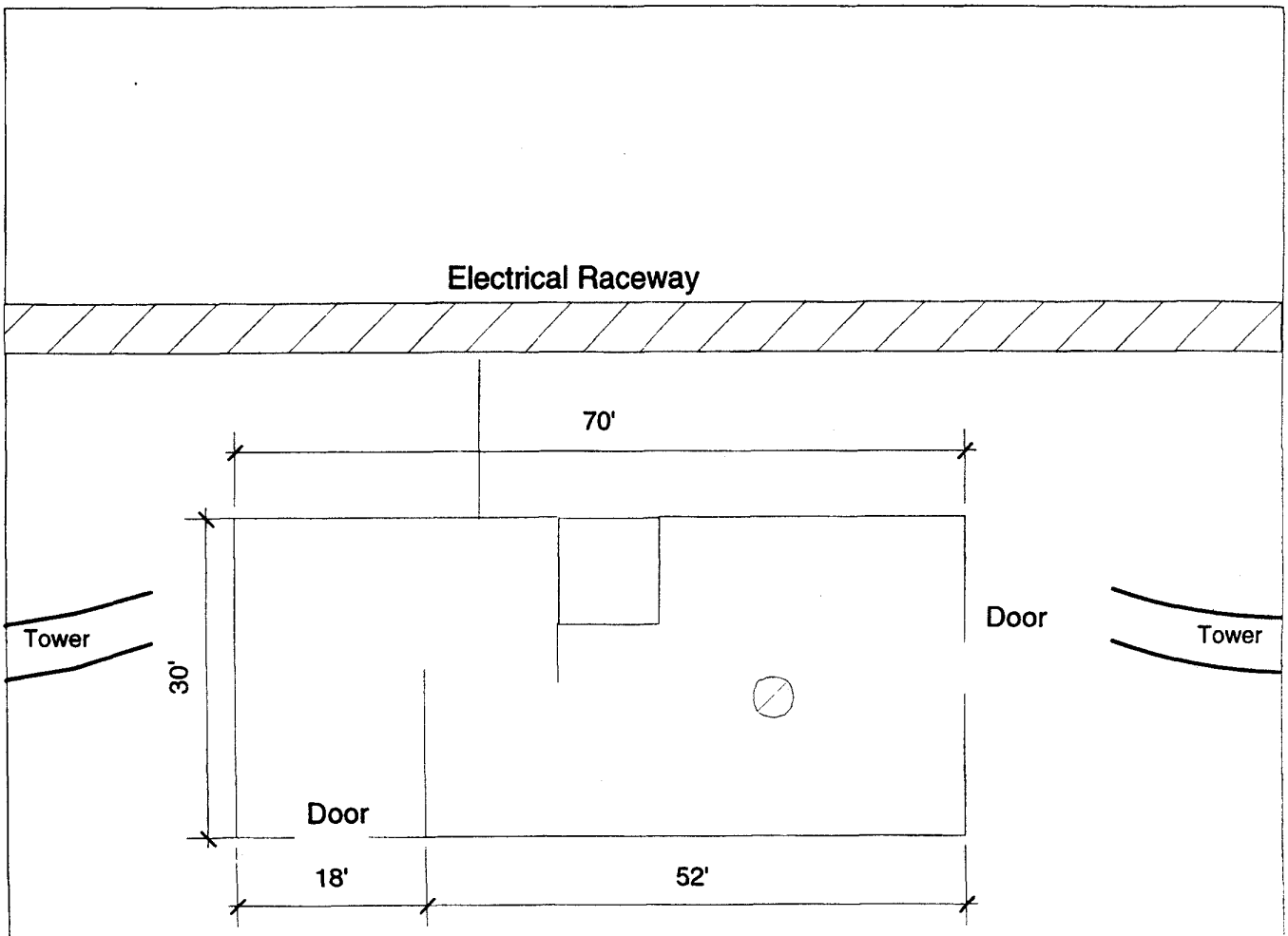
N

0 5 10 20

SCALE IN FEET

Site 85 Tropospheric Relay Station
Plan View

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 85-1 LBP Sample Locations



Recommendations:
Demolish electrical raceway.
Demolish pipe inside building.
Remove paint from tower footings.
Salvage small metal tower.

Approx. location of small tower.

Demolish

N

0 5 10 20

SCALE IN FEET

Site 85 Tropospheric Relay Station
Plan View

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 85-2 LBP Abatement Plan

4.38 Site 86 Satellite Tracking Station

Description

The remains of the satellite tracking station consist of an 11-foot x 11-foot x 8-foot concrete building with a 20-foot diameter circular top that contains four 4-inch-diameter conduit pipes, a concrete pad, and several felled telephone poles (see photograph 86). A similar structure is located on one of the gun mounts at Point Davison.

Suspect Materials

Two samples were taken at this site: one interior/exterior paint chip sample and one perimeter soil sample. Refer to the LBP Data Tables in Appendix B for descriptions of the material sampled and analytical information. See Figure 86-1 for sample locations.

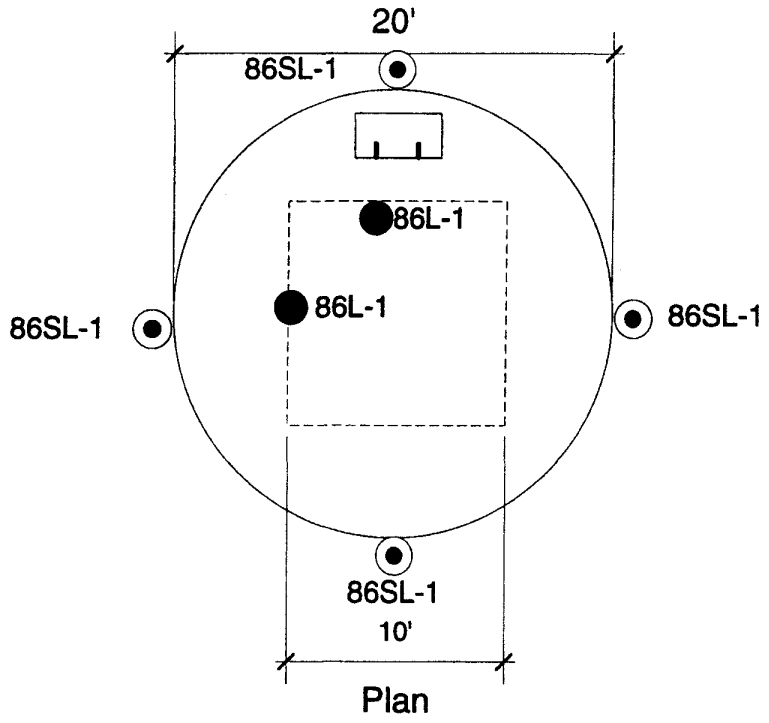
Lead-Based Paint Materials

No LBP materials were found at this site.

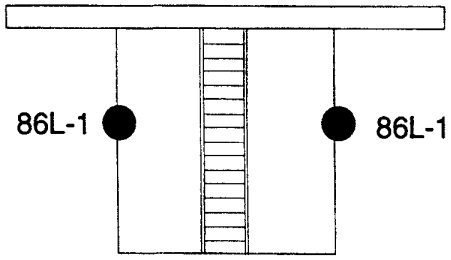
Recommendations

No action is recommended.

Photograph 86: Satellite Tracking Station



Plan



East End

Sample Types
▲ -Ceiling
■ -Floor
● -Wall
♦ -Roof
⬡ -Misc
⊙ -Soil
◒ -Dust

No LBP materials found.
No recommended action.

N

0 5 10

SCALE IN FEET

Site 86 Satellite Tracking Station

RIDOLFI ENGINEERS	METLAKATLA PENINSULA LEAD BASED PAINT INVESTIGATION	Figure 86-1
		LBP Sample Locations

5.0 SCOPE, COST, AND SCHEDULE FOR ABATEMENT

5.1 Scope of the Work

The recommended work requires the disturbance, demolition, removal, and disposal of LBP as described in Section 4. All LBP work shall be performed in compliance OSHA standards published in Subpart D of Title 29 CFR Section 1926.62. An overview of the work methods and provisions to accomplish them appears in Appendix D (Lead Paint Remediation Methods).

Definitions and abbreviations pertaining to LBP removal and disposal are provided in Appendix A (Glossary) and the applicable regulations, codes, standards, and guidance materials are listed in Appendix C (Applicable Regulations).

Lead-based paint abatement work can be very site specific. Circumstances and site conditions often dictate methods and procedures necessary to perform a safe and quality job. The following general procedures are recommended as a supplement to the regulations for specific elements of the LBP abatement work on Metlakatla Peninsula.

5.1.1 Excavation of Soils

Where excavation of soils is required, the area will be delineated and staked to control grade and the top layers removed to a depth of one foot. Once the excavated soils are removed, the area will be inspected by the engineer to ensure adequate removal prior to confirmatory sampling. Confirmatory soil sampling will consist of four-part composites taken by the contractor based on a random grid provided by the engineer.

In areas where top soil is to be brought in, the site will be regraded and scarified and top soil will be placed and graded. Place and spread any additional nutrients and cross disk using standard agricultural methods; then hydroseed per recommended rate of seed application (not less than 25 pounds per acre). A mix of grass/forb species native to the Metlakatla Peninsula is to be used.

In areas where top soil is not brought in, the site will be regraded and scarified. Place and spread any additional nutrients and cross disk using standard agricultural methods; then hydroseed per recommended rate of seed application (not less than 25 pounds per acre). A mix of grass/forb species native to the Metlakatla Peninsula is to be used.

Existing evergreen trees and shrubs greater than 6 inches in diameter as measured 6 inches above the ground surface will be flagged and kept protected throughout project implementation.

5.1.2 Stockpiling of Soil

Excavated soils will be removed from individual sites and collected in a designated central area, such as the historical DOD quarry area. Soils will be segregated into two groups.

The first group will consist of lead-contaminated soils as outlined during the LBP investigation. These soils will be stockpiled in a central location for profiling and final disposal. If the soils pass toxicity characteristics leaching procedure (TCLP) screening for disposal, the soils may be kept for other uses on site. If the soils fail the TCLP screening, they will either be disposed of at a Resource Conservation and Recovery Act (RCRA) compliant hazardous waste landfill or used on site for other purposes (such as landfill cover soils).

The second group will consist of petroleum-contaminated soil (PCS) that contains fuel-related contaminants. The PCS would be segregated from the lead-contaminated soils. PCS lends itself to landfarming, biotreatment, incineration, and lower disposal rates than do lead-contaminated soils if transported off island to a RCRA-regulated waste landfill.

Stockpiled soils will be isolated from the environment by lining the placement location, covering the piles securely with severe-winter-weather covers, and establishing provisions for high winds and heavy rains. An Arctic Liner (Typ) at least 38 mil in thickness would be a suitable liner, and TX-1200 Griffylon (Typ) plastic sheeting at least 20 mil in thickness would be an appropriate cover. Covers and liners will be secured by sandbags, netting, and stakes as appropriate. Stockpile areas will be shaped and graded by dozer, bermed with native soils, lined, and covered. The cover will be secured and the perimeter will be fenced.

5.1.3 Lead Based Paint Chips

During the remediation of impacted structures, LBP will be removed by mechanical means using a needle gun with a vacuum pickup device (Typ). The exhaust will be filtered and the filtrate will be captured along with the paint chips. The material will be drummed in hazardous waste drums and stockpiled for subsequent disposal or directed to a RCRA-compliant hazardous waste landfill.

5.1.4 Salvage and Stockpiled Materials

Metals are to be collected from different sites and placed in stockpiles in a designated central location, such as at the former DOD quarry area. ASTs, USTs, and other tanks will be cut into manageable pieces not to exceed 8 feet x 40 feet. The stockpile area will be fenced and locked for security and to control access. Metals will be segregated into steel and aluminum piles for future salvage. Salvageable metals will be available for inspection by metal recyclers by appointment only.

5.2 Probable Cost Estimate

Cost estimates were determined by estimating quantities in the field and outlining the work required for each type of material. This was done on a site-by-site basis. All site elements were then accumulated and contingency, area factors, mobilization, waste handling, and waste disposal were calculated for the entire project. Costs were broken down into different work methods, which incorporate different work practices and levels of ***personal protection***. These were then codified for each site to cover all materials and classes of materials encountered. Basic unit costs were taken from Means Construction Cost Data tables for 1997 and from Environmental Cost Handling Options and Solutions (ECHOS) cost data tables for 1995.

Waste disposal assumes that all LBP-containing materials will be disposed of off island at a controlled RCRA-compliant landfill. Overseas container boxes, similar to the garbage transfer boxes currently used for the City of Ketchikan (or equivalent), would be used to transport LBP materials. These costs assume an ability to off load at Metlakatla and that the supporting infrastructure of docks, roads, and lifting capacity will be available.

The LBP abatement work is summarized by site in Table 1. Table 2 presents cost estimates for LBP abatement by site and for the project area as a whole.

5.3 Construction Schedule

The estimated time to conduct the LBP mitigation at all of the sites in the project area is 1 year. A probable schedule is shown on Figure 6.

Table 1. Summary of lead-based paint abatement work for each site.

Site Name & Number	Demolish Wood Structure	Demolish Metal Structure	Mech. Remove/ Repaint	Wet-Scrape/ Encap-sulate	Tank Decom.	Remove Soil	Replace Soil	No Action
7 BIA Road Maintenance Center				X				
14 Chlorination Building								X
15 White Alice Station				X		X	X	
16 Antenna Towers		X						
19 DOD/FAA Non-Directional Beacon		X						NA
20 Weather Bureau Housing(occupied)						X	X	
20 Weather Bureau Housing(condm'd)	X					X	X	
21 Remote Control Air Ground Station								NA
22 AACS Station	X					X		
24 Middle Marker Facility	X					X		
25 FAA Approach Lighting System			X			X		
27 VORTAC Facility								NA
29 Directional Finder Antenna								X
32 SALSAR		X				X		
35 Small Tower		X						
36 Glide Slope Facility	X	X				X		
37 Sand Shed/Asphalt Plant		X				X		
42 FAA Tank Farm					X	X (P)		
46 USCG Fire Station/Post Exchange			X					
48 Main Construction Camp	X	X				X		
49 DOD Gasoline Station	X					X		
50 Fire Truck Hut		X				X		
53 FAA Housing Area (occupied)				X		X	X	
53 FAA Housing Area (unoccupied)	X					X		
54 Public School						X		
56 PNA/WA Apartments								X
63 Remote Receiver Station		X				X		
67 Weather Bureau Station								X
69 USCG Quarters						X		
70 DOD Beacon Tower			X					
72 Hangar Boiler Building				X				
73 Boiler Building AST					X	X (P)		
74 USCG ASTs					X	X (P)		
75 Hangar	X		X					
77 PNA/WA Terminal	X							
78 DOD Air Traffic Control Tower			X					
80 Localizer	X					X		
82 Winnipeg Garrison/Annette Inn	X					X		
85 Tropospheric Relay Station	X	X	X					
86 Satellite Tracking Station								X

(P) Petroleum-Contaminated Soil
NA - Not Accessible

Table 2. Probable cost estimate for lead-based paint abatement.

Site	Cost	Waste Cubic Feet	Paint Chip Cubic Feet	Soil Cubic Yard
7 BIA Road Maintenance Center	$40,000.00		12	
14 Chlorination Building	$0.00			
15 White Alice Station	$87,000		12	430
16 Antenna Towers	$6,000			
19 DOD/FAA Non-Directional Beacon	$8,000			
20 Weather Bureau Housing (occupied)	$13,000			620
20 Weather Bureau Housing (unoccupied)	$19,000	16,000		125
21 *Remote Control Air Ground*	not included			
22 AACS Station	$32,000	4,800		170
24 Middle Marker Facility	$2,000	480		60
25 FAA Approach Lighting System	$72,000		32	500
27 *VORTAC Facility*	not included			
29 Directional Finder Antenna	$0.00			
32 SALSAR	$1,000.00			33
35 Small Tower	$2,000.00			
36 Glide Slope Facility	$1,600	320		50
37 Sand Shed/Asphalt Plant	$4,000	100		150
42 FAA Tank Farm	$177,000			1,600
46 USCG Fire Station/Post Exchange	$17,000		20	
48 Main Construction Camp	$533,000	85,000		15,000
49 DOD Gasoline Station	$7,000	6,000		100
50 Fire Truck Hut	$6,000	5,500		125
53 FAA Housing Area (occupied)	$68,000		20	480
53 FAA Housing Area (unoccupied)	$85,000	75,000		600
54 Public School	$5,000			350
56 PNA/WA Apartments	$0			
63 Remote Receiver Station	$8,000			36
67 Weather Bureau Station	$0			
69 USCG Quarters	$4,000			280
70 DOD Beacon Tower	$3,000		2	
72 Hangar Boiler Building	$5,000	7	6	
73 Boiler Building AST	$2,000			17
74 USCG ASTs	$9,000			110
75 Hangar	$95,000	7,400	25	
77 PNA/WA Terminal	$36,000	3,000		
78 DOD Air Traffic Control Tower	$5,000		3	
80 Localizer	$3,000	1,200		80
82 Winnipeg Garrison/Annette Inn	$54,000	41,000		760
85 Tropospheric Relay Station	$2,000	600	1	
86 Satellite Tracking Station	$0			
Estimated Site Subtotal	$1,412,000	246,407	133	21,676
Waste Site Security	$97,000			
Waste Container Handling	$1,279,000			
Mobilization @ 15%	$418,000			
Contingencies @ 15%	$481,000			
Subtotal	$3,687,000			
Escalated by 1.35 for Alaska	$4,977,000			
Container Barging	$3,198,000			
Disposal in Landfill	$5,142,000			
Probable Cost Estimate	**$13,320,000**			

Figure 6 Construction Schedule	Start Date	Finish Date	Duration
MOBILIZATION	2/1/99	3/12/99	30.00
#7 BIA ROAD MAINTENANCE CENTER	3/12/99	4/8/99	20.00
#14 CHLORINATION BUILDING	4/9/99	4/9/99	0.00
#15 WHITE ALICE STATION	4/12/99	4/27/99	12.00
#16 ANTENNA TOWERS	4/28/99	4/28/99	1.00
#19 DOD/FAA NON-DIRECTIONAL BEACON	4/29/99	4/29/99	1.00
#20 WEATHER BUREAU HOUSING (occupied)	4/30/99	5/6/99	5.00
#20 WEATHER BUREAU HOUSING (unoccupied)	5/7/99	5/10/99	2.00
#21 REMOTE CONTROL AIR GROUND STATION	5/11/99	5/11/99	0.00
#22 AACS STATION	5/12/99	5/14/99	3.00
#24 MIDDLE MARKER FACILITY	5/17/99	5/17/99	1.00
#25 FAA APPROACH LIGHTING SYSTEM	3/15/99	7/16/99	90.00
#27 VORTAC FACILITY	5/18/99	5/18/99	0.00
#29 DIRECTIONAL FINDER ANTENNA	5/18/99	5/18/99	0.00
#32 SALSAR	5/19/99	5/19/99	1.00
#35 SMALL TOWER	5/20/99	5/20/99	1.00
#36 GLIDE SLOPE FACILITY	5/21/99	5/24/99	2.00
#37 SAND SHED/ASPHALT PLANT	5/25/99	5/25/99	1.00
#42 FAA TANK FARM	5/26/99	6/15/99	15.00
#46 USCG FIRE STATION/POST EXCHANGE	6/16/99	6/17/99	2.00
#48 MAIN CONSTRUCTION CAMP	6/18/99	8/26/99	50.00
#49 DOD GASOLINE STATION	8/27/99	8/31/99	3.00
#50 FIRE TRUCK HUT	9/1/99	9/2/99	2.00
#53 FA A HOUSING AREA (occupied)	9/3/99	10/12/99	28.00
#53 FA A HOUSING AREA (unoccupied)	9/29/99	10/19/99	15.00
#54 PUBLIC SCHOOL	10/13/99	10/13/99	1.00
#56 PNA/WA APARTMENTS	10/14/99	10/14/99	0.00

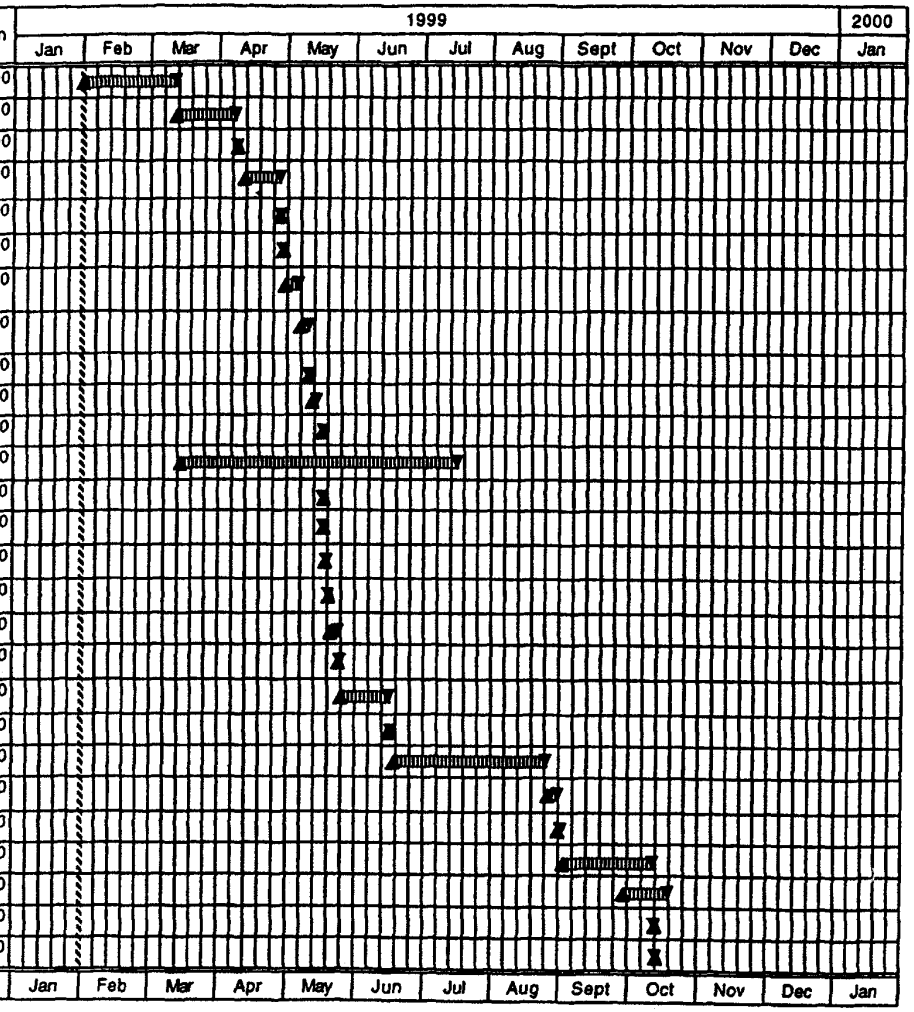
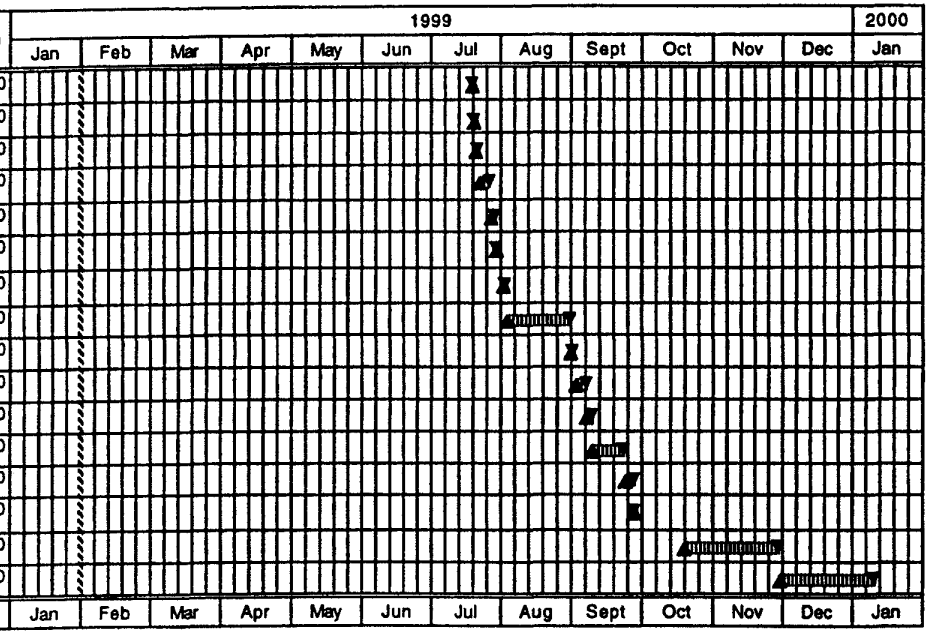


Figure 6 Construction Schedule	Start Date	Finish Date	Duration
#63 REMOTE RECEIVER STATION	7/19/99	7/19/99	1.00
#67 WEATHER BUREAU STATION	7/20/99	7/20/99	0.00
#69 USCG QUARTERS	7/21/99	7/21/99	1.00
#70 DOD BEACON TOWER	7/22/99	7/27/99	4.00
#72 HANGAR BOILER BUILDING	7/28/99	7/29/99	2.00
#73 BOILER BUILDING AST	7/30/99	7/30/99	1.00
#74 USCG ASTs	8/2/99	8/3/99	2.00
#75 HANGAR	8/4/99	8/31/99	20.00
#77 PNA/WA TERMINAL	9/1/99	9/1/99	1.00
#78 DOD AIR TRAFFIC CONTROL TOWER	9/3/99	9/7/99	3.00
#80 LOCALIZER	9/8/99	9/9/99	2.00
#82 WINNIPEG GARRISON/ANNETTE INN	9/10/99	9/23/99	10.00
#85 TROPOSPHERIC RELAY STATION	9/24/99	9/27/99	2.00
#86 SATELLITE TRACKING STATION	9/28/99	9/28/99	0.00
POST-CONSTRUCTION VERIFICATION & TESTING	10/19/99	11/29/99	30.00
DEMOBILIZATION	11/30/99	1/10/00	30.00



6.0 SUMMARY AND RECOMMENDATIONS

6.1 Conducting Mitigation Projects

Key elements of the LBP mitigation project include comprehensive and precise contract specifications, workers specially trained in LBP abatement, rigorously applied worker protections, site containment measures, and regular monitoring of the work sites. When mitigation activities are complete, an entire work site should be thoroughly cleaned. The contractor should be released only after the work site has passed visual inspection, soil verification sampling and analysis, and clearance testing for airborne lead.

A contractor is usually hired to conduct LBP mitigation work that goes beyond maintenance. Steps in selecting a contractor include checking references, conducting interviews, reviewing insurance coverage, and writing precise contract specifications. Note that the most cost-effective contractor is not necessarily the lowest bidder.

As in all construction jobs, the program manager or the manager's representative (frequently the technical advisor) should visit the LBP mitigation work site often to check that all plans and procedures are properly implemented. The work site monitor should:

- Be sure the workers follow specifications.
- Confirm compliance with worker protection requirements.
- Ensure that containment barriers around the work site are properly constructed and maintained.

By carefully monitoring the mitigation work, the LBP program manager can correct errors quickly. Work site inspections greatly increase a project's likelihood of success. The importance of doing the job right the first time cannot be over-emphasized.

An LBP mitigation project is successful when the source of lead has been controlled and when airborne lead generated during abatement activities has been reduced to an acceptable level. When the project is completed, the entire site should be cleaned. Success is confirmed through a final evaluation at each work area. The evaluation consists of visual inspection, soil verification testing, and clearance air testing. Only then is the contractor released.

7.0 REFERENCES

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APPENDIX A

GLOSSARY

GLOSSARY

ACM	Asbestos-containing-material; any material containing more than 1% asbestos.
Aggressive Sampling	Air sampling that takes place after final cleanup while the air is being physically agitated to produce a "worst case" situation.
Air Monitoring	The process of measuring the airborne fiber concentration of a specific quantity of air over a given amount of time.
ANSI	American National Standards Institute
Approved Landfill	A site for the disposal of hazardous wastes that has been given EPA approval.
Asbestos Abatement	Procedures to control fiber release from asbestos-containing materials in buildings.
Clean Area	The first stage of the ***decontamination enclosure system*** in which workers prepare to enter the work areas.
Competent Person	As defined in the OSHA Lead Construction Standard (29 CFR 1926.62), a person who is capable of identifying or predicting hazardous working conditions and work areas, and who has authorization to take prompt, corrective measures to eliminate the hazards. A competent person is not necessarily a risk assessor, inspector, or abatement project supervisor.
Decontamination Enclosure System	A series of connected rooms with ***polyethylene*** curtained doorways for the purpose of preventing contamination of areas adjacent to the work area.
DOD	United States Department of Defense
Encapsulant (sealant)	A substance applied to lead-based paint-containing material that controls the release of airborne lead-based paint.
Encapsulation	The coating of lead-based paint-containing material with a bonding or sealing agent to prevent the release of airborne fibers.
EPA	Environmental Protection Agency
EPA Regulations	Regulatory standards which cover emissions into the outside environment from a workplace and disposal of hazardous wastes from job sites.
F/CC	Fibers per cubic centimeters of air
FAA	Federal Aviation Administration

Personal Sample	An air sample taken with the sampling pump directly attached to the worker with the collecting filter placed in the worker's breathing zone.
Personnel Protection	Notification and instruction of all workers prior to the beginning of a project as to the hazards associated with the job and what they can do to protect themselves from these hazards.
Polyethylene	Plastic sheeting that is often used to seal off an area in which lead-based paint removal is taking place for the purpose of preventing contamination of other areas.
Posting	Refers to caution or warning signs that should be posted in any area in which lead-based paint removal is taking place, or where airborne fiber levels may present a health hazard.
PPM	Parts per million
Protective Clothing	Protective, lightweight garments worn by workers performing lead-based paint abatement to keep gross contamination off the body.
QA/QC	Quality assurance/quality control
Random Sample	A sample drawn in such a way that there is no set pattern; designed to give a true representation of the entire population or area.
Recordkeeping	Detailed documentation of all program activities, decisions, analyses, and any other information pertinent to a project.
STEL	Short term exposure limit
Substrate	The material or existing surface located under or behind the lead-based paint-containing material.
TWA	Time-weighted average, as in air sampling
USCG	United States Coast Guard
Visual Inspection	A walk-through-type inspection of the work area to detect incomplete work, damage, or inadequate cleanup of a worksite.
Wet Cleaning	The process of eliminating lead contamination from surfaces and objects by using cloths, mops, or other cleaning tools that have been dampened with water.
Wet-Scrape	Method used to minimize lead dust: Spray a mist thoroughly over affected areas, then scrape with a wide-blade scraper or appropriate tool, continuing to mist the area thoroughly.

APPENDIX B

DATA TABLES

DATA Table Header Descriptions
A. Site No. (Site Number) - reflects a specific site number unique to the peninsula.
B. Sample Number - is a unique identifying number representing each sample taken.
C. Lab Number - is a unique number corresponding to the sample number assigned by the laboratory.
D. Functional Space - Space or area used to differentiate various materials and quantities.
E. Hmat Number - A Homogeneous Material is a homogeneous area containing a suspect friable material that is uniform in texture and color and appears identical in every other respect.
F. PPM results - reflects the parts per million (PPM) of lead in suspect paint material.
G. Percent LBP - reflects the total percentage of lead in suspect material.
H. Potential for Disturbance - indicates the likelihood of LBP being disturbed in the future, related to: 1) the frequency of contact between the LBP and human activity, 2) location of LBP with respect to vibration sources, and 3) the potential for air erosion. Three categories are used: 1) "Potential for Significant Damage" (PotSigDam), 2) "Potential for Damage" (PotDam), 3) "Medium Potential" (MedPot), and 4) "Low Potential" (LowPot).
I. Disturbance Source - reflects the type of condition or action that might disturb the LBP. Four types of disturbance exist: 1) physical contact with material (C), 2) vibration influence (V), 3) air erosion (A), and 4) water erosion and/or influence (W).
J. Condition - is a description of the physical condition of the LBP based on a visual inspection. 1) "Good Condition" (Good), 2) "Damaged" (Dam), and 3) "Significantly Damaged" (SigDam).
K. Hazard Rank - A score of "1" indicates a significant hazard, while a score of "5" indicates a low hazard. (The ranking system employed evaluates material on the basis of its condition and potential for disturbance.)
L. Approximate Quantity of Material/Room - is the total estimated quantity of LBP in the room.
M. Building functional description as listed for each site.
N. Room Description - is the type or name of the room, usually based on use.
O. Material Description - is the type of building material inspected and assessed.
P. Sample Location - reflects the specific building component on which suspect material is found.
Q. Date Sampled - date sample was actually taken on site.

Site	Sample Number	Lab Number	Funct Space	Hmat Number	PBM Result	Percent LPB	Potential for Disturbance	Disturb Source	Condition	Haz Rank	Recomd Action	Approximate Quantity	Building	Room Description	Material Description	Sample Location	Date Sampled
7	7L-1	9709315	1	1	190,000	19.00	PotSigDam	C, A, W	SigDam	1		10700 sq. ft	BIA Yard	Office	White exterior paint	Exterior wall	8/12/97
	7L-3	9709317	1	1	1,700	0.17	PotSigDam	C, A, W	SigDam	1		10700 sq. ft	BIA Yard	Office	White exterior paint	Exterior wall	8/12/97
	7L-2	9709316	1	2	10,000	1.00	PotSigDam	C, A, W	SigDam	1		500 sq. ft	BIA Yard	Office	Bolt tar sealer	Wall	8/12/97
	7L-4	9709318	1	3	120,000	12.00	PotSigDam	C, A, W	SigDam	1		2000 sq. ft	BIA Yard	Office	Green under exterior	Wall	8/12/97
	7L-5	9709319	1	4	1,400	0.14	PotSigDam	C, A, W	SigDam	1		200 sq. ft	BIA Yard	Office	Blue door & trim paint	Door & trim	8/12/97
	7L-6	9709320	1	4	1,300	0.13	PotSigDam	C, A, W	SigDam	1		200 sq. ft	BIA Yard	Office	Blue door & trim paint	Door & trim	8/12/97
	7SL-1	9710080	-	-	330	-	-	-	-	-		-	BIA Yard	Outside	Soil sample	between buildings	9/13/97
	7SL-2	9710081	-	-	210	-	-	-	-	-		-	BIA Yard	Outside	Soil sample	outer perimeter of all buildings	9/13/97
14	14L-4		1	1	-	-	-	-	-	-		39 ft	Chlorine Building	Mechanical	Raw water line, green paint	Raw water line	7/17/97
	14A-1	9710425	1	1	6,800	0.68	LowPot	C, A, W	Good	5		39 ft	Chlorine Building	Mechanical	Green Paint	Raw water line	7/17/97
	14A-2	9710426	1	1	9,900	0.99	LowPot	C, A, W	Good	5		39 ft	Chlorine Building	Mechanical	Green Paint	Raw water line	7/17/97
	14L-3		1	2	-	-	-	-	-	-		40 ft/95 sq ft	Chlorine Building	Mechanical	Tank/filter water/backwash lines, blue paint	Tank/filter water/backwash line	7/17/97
	14A-4	9710427	1	2	190	0.02	LowPot	C, A, W	Good	5		40 ft/95 sq ft	Chlorine Building	Mechanical	Blue Paint	Tank/filter water/backwash line	7/17/97
	14A-8	9710428	1	2	<120	-	LowPot	C, A, W	Good	5		40 ft/95 sq ft	Chlorine Building	Mechanical	Blue Paint	Tank/filter water/backwash line	7/17/97
	14A-10	9710429	1	2	<110	-	LowPot	C, A, W	Good	5		40 ft/95 sq ft	Chlorine Building	Mechanical	Blue Paint	Tank/filter water/backwash line	7/17/97
	14L-1	9709321	1	3	<86	-	LowPot	C, A, W	Good	5		1412 sq ft	Chlorine Building	Mechanical	Beige w/ heavy coat	Interior	7/19/97
	14L-2	9709322	1	4	<99	-	PotSigDam	C, A, W	SigDam	1		932 sq. ft	Chlorine Building	Mechanical	Brownish orange exterior	Exterior	7/19/97
	14SL-1	9710082	-	-	<41	-	-	-	-	-		-	Chlorine Building	Outside	Soil sample	drip line of buildings	9/12/97
	14SL-2	9710083	-	-	<43	-	-	-	-	-		-	Chlorine Building	Outside	Soil sample	drip line plus 15'	9/12/97
15	15L-11	9710049	0	1	180	0.02	PotSigDam	C, A, W	SigDam	1		13500 sq. ft	White Alice Station	Exterior surface paint	White Surface paint	West entry	9/11/97
	15L-1	9710039	1	1	4,900	0.49	LowPot	C, A, W	Good	5		792 sq. ft	White Alice Station	Storage area	Light gray paint	West Wall	9/11/97
	15L-2	9710040	1	2	2,500	0.25	LowPot	C, A, W	Good	5		3366 sq. ft	White Alice Station	Storage area	Dark gray paint	East and North Wall	9/11/97
	15L-3	9710041	1	3	270,000	27.00	LowPot	C, A, W	Good	5		14220 sq. ft	White Alice Station	Ceiling paint	Creme/White Ceiling paint	East ceiling	9/11/97
	15L-4	9710042	1	4	310	0.03	LowPot	C, A, W	Good	5		140 sq. ft	White Alice Station	Office hallway, drk. blue trim	Dark blue paint	West wall	9/11/97
	15L-5	9710043	1	5	2,500	0.25	LowPot	C, A, W	Good	5		8058 sq. ft	White Alice Station	Office hallway, white	White paint	Inside copy room	9/11/97
	15L-6	9710044	1	6A	520	0.05	LowPot	C, A, W	Good	5		6834 sq. ft	White Alice Station	Office hallway, light blue	Light (baby) blue paint	West wall	9/11/97
	15L-7	9710045	1	7	4,000	0.40	LowPot	C, A, W	Good	5		700 sq. ft	White Alice Station	Equipment room	Dark Gray wall paint	East wall	9/11/97
	15L-8	9710046	1	8	6,800	0.68	LowPot	C, A, W	Good	5		576 sq. ft	White Alice Station	Machine shop	Blue-Gray wall paint lower section	West wall	9/11/97
	15L-9	9710047	1	9	2,400	0.24	LowPot	C, A, W	Good	5		1872 sq. ft	White Alice Station	Machine shop light grey	Light gray paint	East wall	9/11/97
	15L-10	9710048	1	10	<86	-	LowPot	C, A, W	Good	5		2754 sq. ft	White Alice Station	Lineman's shop white	Beige/White paint	East wall	9/11/97
	15L-18	9710430	1	11	21,000	2.10	LowPot	C, A, W	Good	5		3090 ft	White Alice Station	Office under stairwell	White pipe wrap paint (ACM Sample 15A-1)	Under stairwell	7/18/97
	15L-12	9710050	2	1	1,700	0.17	LowPot	C, A, W	Good	5		2000 sq. ft	White Alice Station	Living quarters, white	White paint	West window	9/11/97
	15L-13	9710051	2	2	3,000	0.30	LowPot	C, A, W	Good	5		2000 sq. ft	White Alice Station	Windowsill pink	Pink paint	West wall	9/11/97
	15L-14	9710052	2	3	350	0.04	LowPot	C, A, W	Good	5		450 sq. ft	White Alice Station	Living quarters, kitchen	Yellow paint	North and west walls	9/11/97
	15L-15	9710053	2	4	1,200	0.12	LowPot	C, A, W	Good	5		650 sq. ft	White Alice Station	Upstairs, Laundry room	Gray wall paint	North wall	9/11/97
	15L-16	9710054	2	5	3,700	0.37	LowPot	C, A, W	Good	5		5760 sq. ft	White Alice Station	Upstairs bedrms, drk. blue	Dark blue paint	West composite	9/11/97
	15L-17	9710055	2	6	1,600	0.16	LowPot	C, A, W	Good	5		5760 sq. ft	White Alice Station	Upstairs bedrms, light blue	Light blue paint	West composite	9/11/97
*	15WL-1	9710175	2		520								White Alice Station	MPL area	Dust wipe	West floor	9/11/97
*	15WL-2	9710176	2		< 230								White Alice Station	MPL area	Dust wipe	Hallway floor	9/11/97
*	15WL-3	9710177	2		< 230								White Alice Station	Living Quarters	Dust wipe	Bedroom radiator	9/11/97
*	15WL-4	9710178	2		240								White Alice Station	Living Quarters	Dust wipe	Living room radiator	9/11/97
	15SL-1	9710090	-	-	580	-	-	-	-	-		-	White Alice Station	Outside	Soil sample	drip line of buildings	9/13/97
	15SL-2	9710091	-	-	<45	-	-	-	-	-		-	White Alice Station	Outside	Soil sample	drip line plus 20'	9/13/97
16	16L-1	9710017	1	-	380,000	38.00	PotSigDam	C, A, W	SigDam	1		500 sq. ft	Antenna Towers	Tower	Faded Red paint	Tower	9/15/97
	16L-2	9710018	1	-	870,000	87.00	PotSigDam	C, A, W	SigDam	1		500 sq. ft	Antenna Towers	Tower	White paint	Tower	9/15/97
20	20L-1	9709323	1	-	5,700	0.57	MedPot	A, W	Dam	2		1600 sq. ft	Weather Bureau Housing	B-3 exterior	Blue-Gray Paint	B-3 exterior	9/11/97
	20L-2	9709324	1	-	500	0.05	LowPot	A, W	Good	5		4800 sq. ft	Weather Bureau Housing	B-3 Interior	Creme-Beige Paint	B-3 interior	9/11/97
	20L-3	9709325	1	-	3,700	0.37	LowPot	A, W	Good	2		1600 sq. ft	Weather Bureau Housing	B-6 exterior	Brownish-Creme Paint	B-6 exterior	9/11/97
	20L-4	9709326	1	-	150,000	15.00	LowPot	A, W	Good	5		200 sq. ft	Weather Bureau Housing	B-3 trim	Blue-White Paint	B-3 trim	9/11/97
*	20WL-1	9710173	-	-	< 230		-	-	-	-		-	Weather Bureau Housing	B-6 Window sill	Dust	B-6 Window sill	9/11/97
*	20WL-2	9710174	-	-	< 230		-	-	-	-		-	Weather Bureau Housing	B-6 Window sill	Dust	B-6 Window sill	9/11/97
	20SL-1	9710084	-	-	490	-	-	-	-	-		-	Weather Bureau Housing	Outside	Soil sample	drip line of buildings	9/13/97
	20SL-2	9710085	-	-	<41	-	-	-	-	-		-	Weather Bureau Housing	Outside	Soil sample	drip line plus 15'	9/13/97

*Dust wipe results in µg/sq ft

Site	Sample Number	Lab Number	Funcl Space	Hmat Number	PBM Result	Percent LPB	Potential for Disturbance	Disturb Source	Condition	Haz Rank	Recomd Action	Approximate Quantity	Building	Room Description	Material Location	Sample Date Sampled
22	22L-1	9709208	1	1	210,000	21.00	PotSigDam	C, A, W	SigDam	Debris		1280 sq. ft	AACS	Electronics	Exterior white paint	Exterior wall	8/10/97
	22L-2	9709209	1	2	410,000	41.00	PotSigDam	C, A, W	SigDam	Debris		1270 sq. ft	AACS	Electronics	Faded Red paint	Roof	8/10/97
	22L-3	9709210	1	3	7,000	0.70	PotSigDam	C, A, W	SigDam	Debris		320 sq. ft	AACS	Electronics	Green/blue trim	Trim	8/10/97
	22L-4	9709211	1	4	420,000	42.00	PotSigDam	C, A, W	SigDam	Debris		20 ft	AACS	Electronics	Faded Red paint	Rail	8/10/97
	22L-5	9709212	1	5	17,000	1.70	PotSigDam	C, A, W	SigDam	Debris		20 ft	AACS	Electronics	White paint on conduit	Conduit	8/10/97
	22L-6	9709213	1	6	83,000	8.30	PotSigDam	C, A, W	SigDam	1		300 sq. ft	AACS	Electronics	White tower paint	Tower	8/10/97
	22L-7	9709214	1	7	370,000	37.00	PotSigDam	C, A, W	SigDam	1		300 sq. ft	AACS	Electronics	Faded Red paint	Tower	8/10/97
	22SL-1	9710100	-	-	480	-	-	-	-	-		-	AACS	Outside	Soil sample	drip line of buildings	9/15/97
	22SL-2	9710101	-	-	52	-	-	-	-	-		-	AACS	Outside	Soil sample	drip line plus 15'	9/15/97
24	24L-1	9709327	1	1	130,000	13.00	PotSigDam	C, A, W	SigDam	1		420 sq. ft	Middle Marker Facility	Electronics	Exterior white paint	Exterior wall	8/10/97
	24L-2	9709328	1	2	43,000	4.30	PotSigDam	C, A, W	SigDam	1		320 sq. ft	Middle Marker Facility	Electronics	Interior green	Interior wall	8/10/97
	24L-3	9709329	1	3	55,000	5.50	PotSigDam	C, A, W	SigDam	1		100 sq. ft	Middle Marker Facility	Electronics	Interior white	Interior wall	8/10/97
	24L-4	9709330	1	4	1,200	0.12	PotSigDam	C, A, W	SigDam	1		20 ft	Middle Marker Facility	Electronics	Silver paint on metal poles	Metal poles	8/10/97
	24SL-1	9710086	-	-	2,600	-	-	-	-	-		-	Middle Marker Facility	Outside	Soil sample	drip line of buildings	9/12/97
	24SL-2	9710087	-	-	63	-	-	-	-	-		-	Middle Marker Facility	Outside	Soil sample	drip line plus 15'	9/12/97
25	25L-1	9709331	1	1	250,000	25.00	PotSigDam	C, A, W	SigDam	1		250 sq. ft	Approach lighting system	Electronics	Faded Red paint	Tower 1	8/10/97
	25L-2	9709332	1	2	200,000	20.00	PotSigDam	C, A, W	SigDam	1		250 sq. ft	Approach lighting system	Electronics	Faded Red paint	Tower 11	8/10/97
	25L-3	9709333	1	3	230,000	23.00	PotSigDam	C, A, W	SigDam	1		250 sq. ft	Approach lighting system	Electronics	Faded Red paint	Tower 25	8/10/97
	25L-4	9709334	1	4	280,000	28.00	PotSigDam	C, A, W	SigDam	1		250 sq. ft	Approach lighting system	Electronics	Faded Red paint	Tower 25	8/10/97
	25SL-1	9710088	-	-	580	-	-	-	-	-		-	Approach lighting system	Outside	Soil sample	drip line of buildings	9/12/97
	25SL-2	9710089	-	-	<45	-	-	-	-	-		-	Approach lighting system	Outside	Soil sample	drip line plus 20'	9/12/97
29	29L-1	9710374	-	-	<90	-	PotSigDam	C, A, W	Dam	2		51 sq ft	Direction Finder Antenna	Outside Mount	Faded Red paint	Exterior	10/17/97
	29SL-1	9710403	-	-	<45	-	-	-	-	-		-	Direction Finder Antenna	Outside	Soil sample	2' radius of base	10/17/97
32	32L-1	9710023	1	-	300,000	30.00	PotSigDam	C, A, W	Dam	2		1546 sq. ft	SALSAR	Mechanical/Office	Faded Red paint	Exterior/interior	9/16/97
	32L-2	9710024	1	-	1,400	0.14	PotSigDam	C, A, W	SigDam	1		1456 sq. ft	SALSAR	Mechanical/Office	White paint chip	Exterior	9/16/97
	32SL-1	9710106	-	-	710	-	-	-	-	-		-	SALSAR	Outside	Soil sample	drip line of buildings	9/16/97
	32SL-2	9710107	-	-	<41	-	-	-	-	-		-	SALSAR	Outside	Soil sample	drip line plus 15'	9/16/97
35	35L-1	9710025	1	-	120,000	12.00	PotSigDam	C, A, W	SigDam	1		125 sq. ft	Small Tower	Tower	White structure paint	Exterior white structure	9/16/97
	35L-2	9710026	1	-	200,000	20.00	PotSigDam	C, A, W	SigDam	1		250 sq. ft	Small Tower	Tower	Faded Red structure paint	Exterior red structure	9/16/97
	35SL-1	9710108	-	-	190	-	-	-	-	-		-	Small Tower	Outside	Soil sample	drip line of buildings	9/16/97
36	36L-1	9709194	1	1	480,000	48.00	PotSigDam	C, A, W	SigDam	1		268 sq. ft	Glide Slope Building	Electronics	Faded Red paint	Exterior	8/10/97
	36L-2	9709195	1	2	27,000	2.70	PotSigDam	C, A, W	SigDam	1		368 sq. ft	Glide Slope Building	Electronics	White paint	Exterior	8/10/97
	36L-3	9709196	1	3	13,000	1.30	PotSigDam	C, A, W	SigDam	1		128 sq. ft	Glide Slope Building	Electronics	Blue/gray trim paint	Interior trim	8/10/97
	36L-4	9709197	1	4	5,700	0.57	PotSigDam	C, A, W	SigDam	1		208 sq. ft	Glide Slope Building	Electronics	Ceiling & wall interior	Interior ceiling & wall	8/10/97
	36L-5	9709198	1	5	8,000	0.80	PotSigDam	C, A, W	SigDam	1		26 sq. ft	Glide Slope Building	Electronics	Porch blue/gray	Exterior porch	8/10/97
	36L-6	9709199	1	5	7,200	0.72	PotSigDam	C, A, W	SigDam	1		26 sq. ft	Glide Slope Building	Electronics	Porch blue/gray	Exterior porch	8/10/97
	36SL-1	9710130	-	-	1,700	-	-	-	-	-		-	Glide Slope Building	Outside	Soil sample	drip line of buildings	9/15/97
	36SL-2	9710131	-	-	57	-	-	-	-	-		-	Glide Slope Building	Outside	Soil sample	drip line plus 15'	9/15/97
37	37L-1	9710027	-	-	2,600	0.26	PotSigDam	C, A, W	SigDam	Debris		Unknown	Sand Shed/Asphalt Plant	Sand Shed/Asphalt Plant	Charred black paint	Debris	9/16/97
	37SL-1	9710109	-	-	2,000	-	-	-	-	-		-		Outside	Soil sample	perimeter of structure	9/16/97
42	42L-1	9709215	-	1	94,000	9.40	PotSigDam	C, A, W	SigDam	1		350 sq. ft	FAA Tank Farm	Mechanical/Pipechase	White exterior bldg. paint	Exterior	9/15/97
	42L-1B	9711165	-	1	140,000	14.00	PotSigDam	C, A, W	SigDam	1		350 sq. ft	FAA Tank Farm	Mechanical/Pipechase	White exterior bldg. paint	Exterior	9/15/97
	42L-2	9709216	-	1	120,000	12.00	PotSigDam	C, A, W	SigDam	1		350 sq. ft	FAA Tank Farm	Mechanical/Pipechase	White exterior bldg. paint	Exterior	9/15/97
	42L-3	9709217	-	2	460,000	46.00	PotSigDam	C, A, W	SigDam	1		1106 sq. ft	FAA Tank Farm	Mechanical/Pipechase	Silver exterior paint	Exterior 15000g tank	9/15/97
	42L-4	9709218	-	3	79,000	7.90	PotSigDam	C, A, W	SigDam	1		2488 sq. ft	FAA Tank Farm	Mechanical/Pipechase	Silver exterior paint	Exterior 50000g tank	9/15/97
	42L-5	9709219	-	4	65,000	6.50	PotSigDam	C, A, W	SigDam	1		250 sq. ft	FAA Tank Farm	Mechanical/Pipechase	Red paint	Roofs, Trim, Pumps, Valves	9/15/97
	42L-6	9709220	-	5	59,000	5.90	PotSigDam	C, A, W	SigDam	1		20 sq. ft	FAA Tank Farm	Mechanical/Pipechase	Green paint	Pumps and meters	9/15/97
	42L-7	9709221	-	6	83,000	8.30	PotSigDam	C, A, W	SigDam	1		>800 ft	FAA Tank Farm	Mechanical/Pipechase	Black pipeline paint	Pipeline	9/15/97
	42SL-1	9709184	-	-	74	-	-	-	-	-		-	FAA Tank Farm	Outside	Soil sample	drip line small tanks	9/15/97
	42SL-2	9709185	-	-	<39	-	-	-	-	-		-	FAA Tank Farm	Outside	Soil sample	drip line large tanks	9/15/97
46	46L-1	9709200	0	-	130	0.01	PotSigDam	C, W, A	SigDam	1		3015 sq. ft	USCG FireStn/Post Exchange	Office/Mechanical	Yellow exterior paint	Exterior	9/15/97
	46L-2	9709201	0	-	5,500	0.55	PotSigDam	C, W, A	SigDam	1		3015 sq. ft	USCG FireStn/Post Exchange	Office/Mechanical	Exterior red trim paint	Exterior	9/15/97
	46L-3	9709202	2	-	1,600	0.16	PotSigDam	C, W, A	SigDam	1		3300 sq. ft	USCG FireStn/Post Exchange	Office/Mechanical	White interior paint	Interior	9/15/97

*Dust wipe results in µg/sq ft

Site	Sample Number	Lab Number	Funcl Space	Hmat Number	PPM Result	Percent LBP	Potential for Disturbance	Disturb Source	Condition	Haz Rank	Recomd Action	Approximate Quantity	Building	Room Description	Material Description	Sample Location	Date Sampled
	46L-4	9709203	2	-	5,400	0.54	PotSigDam	C, W, A	SigDam	1		Incl. Above	USCG FireStn/Post Exchange	Office/Mechanical	Green interior paint	Interior	9/15/97
	46L-5	9709204	2	-	130,000	13.00	PotSigDam	C, W, A	SigDam	1		Incl. Above	USCG FireStn/Post Exchange	Office/Mechanical	Blue interior paint	Interior	9/15/97
	46SL-1	9710134	-	-	72	-	-	-	-	-		-	USCG FireStn/Post Exchange	Outside	Soil sample	drip line of buildings	9/15/97
	46SL-2	9710135	-	-	46	-	-	-	-	-		-	USCG FireStn/Post Exchange	Outside	Soil sample	drip line of buildings	9/15/97
	46SL-3	9710136	-	-	91	-	-	-	-	-		-	USCG FireStn/Post Exchange	Outside	Soil sample	drip line plus 15'	9/15/97
48	48L-1	9710056	-	-	4,800	0.48	PotSigDam	C, W, A	SigDam	Debris	-	-	Main Constr Camp	USCG Buildg	Comp Wall Paints	Interior	8/13/97
	48L-2	9710057	-	-	<89	-	PotSigDam	C, W, A	SigDam	Debris	-	-	Main Constr Camp	Farm Area	Dark Red	Fence	8/13/97
	48L-3	9710058	-	-	7,600	0.76	PotSigDam	C, W, A	SigDam	Debris			Main Constr Camp	Main Camp	Army Green	Debris near Bld 222	8/13/97
	48SL-1	9710120	-	-	63	-	-	-	-	-		-	Main Constr Camp	Main Camp	Soil sample	Composite grid #8 sample	8/13/97
	48SL-2	9710121	-	-	970	-	-	-	-	-		-	Main Constr Camp	Main Camp	Soil sample	Composite grid #9 sample	8/13/97
49	49L-2	9710022	1	1	410	0.04	PotSigDam	C, W, A	Dam	2		2643 sq. ft	Gas Station	Gas station	Silver paint	Interior	9/11/97
	49L-1	9710021	1	2	67,000	6.70	PotSigDam	C, W, A	SigDam	1		3178 sq. ft	Gas Station	Gas station	Faded Red paint	Exterior	8/12/97
	49SL-1	9710104	-	-	1,700	0.17	-	-	-	-		-	Gas Station	Outside	Soil sample	drip line of buildings	9/15/97
	49SL-2	9710105	-	-	69	0.01	-	-	-	-		-	Gas Station	Outside	Soil sample	drip line plus 15'	9/15/97
50	50L-3	9709207	1	1	190,000	9.80	PotSigDam	C, W, A	Dam	2		1148 sq. ft	Fire Truck Hut	Equipment	White paint	North Interior	9/15/97
	50L-1	9709205	1	2	96,000	28.00	PotSigDam	C, W, A	SigDam	1		2175 sq. ft	Fire Truck Hut	Equipment	Red paint	North Exterior	8/12/97
	50L-2	9709206	1	2	280,000	19.00	PotSigDam	C, W, A	SigDam	1		Incl. Above	Fire Truck Hut	Equipment	Red paint (faded)	South Exterior	8/12/97
	50SL-1	9710132	-	-	6,600	-	-	-	-	-		-	Fire Truck Hut	Outside	Soil sample	drip line of buildings	9/15/97
	50SL-2	9710133	-	-	79	-	-	-	-	-		-	Fire Truck Hut	Outside	Soil sample	drip line plus 15'	9/15/97
53	53L-1	9709296	1	-	14,000	1.40	PotSigDam	C, W, A	SigDam	1		3628 sq. ft	FAA Housing	Housing area	Bldg 101: Pink paint	Exterior	9/12//97
	53L-2	9709297	1	-	25,000	2.50	PotSigDam	C, W, A	SigDam	1		182 sq. ft	FAA Housing	Housing area	White trim & doors	Exterior trim & doors	9/12//97
	53L-3	9709298	1	-	23,000	2.30	PotSigDam	C, W, A	SigDam	1		182 sq. ft	FAA Housing	Housing area	White trim & doors	Exterior trim & doors	9/12//97
	53L-4	9709299	1	-	330	0.03	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	Blue paint	Wall	9/12//97
	53L-5	9709300	1	-	250	0.03	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	White wall paint	Wall	9/12//97
	53L-6	9709301	1	-	96	0.01	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	Pink wall paint	Wall	9/12//97
	53L-7	9709302	1	-	900	0.09	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	White wall	Wall	9/12//97
	53L-8	9709303	1	-	1,700	0.17	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	Creme white wall (Tan sublayer)	Wall	9/12//97
	53L-9	9709304	1	-	11,000	1.10	PotSigDam	C, W, A	SigDam	1		260 sq ft	FAA Housing	Housing area	White wall (Yellow sublayer)	Wall	9/12//97
	53L-10	9709305	1	-	1,800	0.18	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	Blue green sublayer	Wall	9/12//97
	53L-11	9709306	1	-	4,500	0.45	PotSigDam	C, W, A	SigDam	1		-	FAA Housing	Housing area	Yellow wainscoting wall	Wall	9/12//97
	53L-12	9709307	2	-	11,000	1.10	PotSigDam	C, W, A	SigDam	1		3628 sq. ft	FAA Housing	Housing area	Bldg 102: Blue exterior paint	Exterior	9/12//97
	53L-13	9709308	2	-	13,000	1.30	PotSigDam	C, W, A	SigDam	1		3628 sq. ft	FAA Housing	Housing area	Bldg 103: Brown exterior paint	Exterior	9/12//97
	53L-14	9709309	2	-	9,500	0.95	PotSigDam	C, W, A	SigDam	1		3628 sq. ft	FAA Housing	Housing area	Bldg 104: Pinkish-white exterior paint	Exterior	9/12//97
	53SL-1	9710092	-	-	490	-	-	-	-	-		-	FAA Housing	Outside Blg 103	Soil sample	drip line of Bldg 103	9/13//97
	53SL-2	9710093	-	-	1,600	-	-	-	-	-		-	FAA Housing	Outside Blg 103	Soil sample	drip line of Bldg 103	9/13//97
	53SL-3	9710094	-	-	<38	-	-	-	-	-		-	FAA Housing	Outside Blg 103	Soil sample	drip line plus 15' of Bldg 103	9/13//97
	53SL-4	9710095	-	-	1,000	-	-	-	-	-		-	FAA Housing	Outside Blg 108	Soil sample	drip line of Bldg 108	9/13//97
	53SL-5	9710096	-	-	53	-	-	-	-	-		-	FAA Housing	Outside Blg 108	Soil sample	drip line plus 15' of Bldg 108	9/13//97
*	53WL-1	9710179			< 230								FAA Housing	Stairwell Bld 108	Dust wipe	Floor	9/12/97
*	53WL-2	9710180			< 230								FAA Housing	Stairwell Bld 108	Dust wipe	Floor	9/12/97
*	53WL-3	9710181			< 230								FAA Housing	Stairwell Bld 108	Dust wipe	Molding	9/12/97
*	53WL-4	9710182			< 230								FAA Housing	Kitchen/Office Bld 108	Dust wipe	Window sill	9/12/97
*	53WL-5	9710183			< 230								FAA Housing	Office Bld 108	Dust wipe	Window sill	9/12/97
54	54L-1	9710019	1	1	4,600	0.46	PotSigDam	C, W, A	SigDam	Debris/1		1100 sq. ft	Public School	Boiler room only	Black wall paint	Boiler room	9/15/97
	54L-2	9710020	1	2	620	0.06	PotSigDam	C, W, A	SigDam	Debris/1		1100 sq. ft	Public School	Boiler room only	White wall paint	Boiler room	9/15/97
	54SL-1	9710137	-	-	140	-	-	-	-	-		-	Public School	General Site Area	Soil sample	Dripline Slab #1	9/15/97
	54SL-2	9710138	-	-	540	-	-	-	-	-		-	Public School	General Site Area	Soil sample	Dripline Slab #2	9/15/97
	54SL-3	9710139	-	-	230	-	-	-	-	-		-	Public School	General Site Area	Soil sample	Gross Surface Composite	9/15/97
56	56L-2	9709311	1	1	7,000	0.70	PotSigDam	W, A	SigDam	1		4560 sq. ft	PNA Apartments	Apt. Building	Older exterior Beige Pink paint	Wall composite	7/24/97
	56L-1	9709310	1	2	2,100	0.21	PotSigDam	W, A	SigDam	1		Incl. Above	PNA Apartments	Apt. Building	Dark red exterior paint	Wall	7/24/97
	56L-3	9709312	1	2	3,700	0.37	PotSigDam	W, A	SigDam	Debris		Incl. Above	PNA Apartments	Apt. Building	Dark red exterior paint	Wall Paint Chips @ Dripline	9/12/97
	56L-4	9709313	1	3	<99	-	LowPot	C	Good	5		9340 sq. ft	PNA Apartments	Apt. Building	Older white/green interior	Upstairs	9/12/97
	56SL-1	9710097	-	-	120	-	-	-	-	-		-	PNA Apartments	Outside	Soil sample	drip line of buildings	9/13/97

*Dust wipe results in µg/sq ft

Site	Sample Number	Lab Number	Funcl Space	Hmat Number	PPM Result	Percent LPB	Potential for Disturbance	Disturb Source	Condition	Haz Rank	Recomd Action	Approximate Quantity	Building	Room Description	Material Description	Sample Location	Date Sampled
	56SL-2	9710098	-	-	<44	-	-	-	-	-		-	PNA Apartments	Outside	Soil sample	drip line plus 15'	9/13/97
*	56WL-1	9710184			< 230								PNA Apartments	Interior	Dust sample	Top stairwell landing	9/12/97
*	56WL-2	9710185			< 230								PNA Apartments	Interior	Dust sample	Upstairs north end floor	9/12/97
*	56WL-3	9710186			< 230								PNA Apartments	Interior	Dust sample	upstairs closet floor	9/12/97
*	56WL-4	9710187			< 230								PNA Apartments	Interior	Dust sample	Entry window sill	9/12/97
63	63L-1	9710001	1	-	240	0.02	PotSigDam	C, W, A	SigDam	1		765 sq. ft	Remote Receiver	Electronics	White Interior paint	Wall Composite	9/12/97
	63L-2	9710002	1	-	500	0.05	PotSigDam	C, W, A	SigDam	1		765 sq. ft	Remote Receiver	Electronics	White Exterior paint	Wall Composite	9/12/97
	63SL-1	9710122	-	-	470	-	-	-	-	-		-	Remote Receiver	Outside	Soil sample	drip line of buildings	9/12/97
	63SL-2	9710123	-	-	110	-	-	-	-	-		-	Remote Receiver	Outside	Soil sample	drip line plus 15'	9/12/97
67	67L-1	9709222	2	1	1,200	0.12	LowPot	C, W, A	Good	5		215 sq. ft	US Weather Bureau Station	Electronics	Brown paint inside small dome Bldg.	Interior	8/12/97
	67L-2	9709223	2	2	2,000	0.20	PotDam	C, W, A	Good	4		215 sq. ft	US Weather Bureau Station	Electronics	Drk. Blue paint - Exterior all Buildings	Exterior - outside small dome	8/12/97
	67L-3	9709224	3	1	<82		LowPot	C, W, A	Good	5		2200 sq. ft	US Weather Bureau Station	Electronics	Baby blue inside large dome Bldg.	Interior	8/12/97
	67L-4	9709225	3	2	2,500	0.25	PotDam	C, W, A	Dam	2		905 sq. ft	US Weather Bureau Station	Electronics	White coating dome surface	Exterior - Large Dome	8/12/97
	67L-5	9709226	3	3	4,800	0.48	PotDam	C, W, A	SigDam	1		905 sq. ft	US Weather Bureau Station	Electronics	Grey/grainy surfacing paint	Interior - Large Dome	8/12/97
	67SL-1	9710102	-	-	340	-	-	-	-	-		-	US Weather Bureau Station	Outside	Soil sample	drip line of Large Dome Bldg.	9/15/97
	67SL-2	9710103	-	-	110	-	-	-	-	-		-	US Weather Bureau Station	Outside	Soil sample	drip line + 15' Lrg Dome Bldg.	9/15/97
69	69L-1	9709227	1	1	260	0.03	PotSigDam	C, W, A	SigDam	1		6800 sq. ft	USCG Housing	Living Areas	Blue Exterior paint	Exterior	9/18/97
	69L-2	9709228	1	2	3,000	0.30	PotSigDam	C, W, A	SigDam	1		3125 sq. ft	USCG Housing	Living Areas	Yellow kitchen paint	Kitchen	9/18/97
	69L-3	9709229	1	2	4,600	0.46	PotSigDam	C, W, A	SigDam	1		3125 sq. ft	USCG Housing	Living Areas	Blue kitchen paint	Kitchen	9/18/97
	69L-4	9709230	1	3	140	0.01	PotSigDam	C, W, A	SigDam	1		20000 sq. ft	USCG Housing	Living Areas	Pink/brown wall coating	Hallways	9/18/97
	69L-5	9709231	1	3	19,000	1.90	PotSigDam	C, W, A	SigDam	1		25000 sq. ft	USCG Housing	Living Areas	Creme wall paint	hallways	9/18/97
	69L-6	9709232	1	3	2,000	0.20	PotSigDam	C, W, A	SigDam	1		Incl. Above	USCG Housing	Living Areas	Blue/green paint	Rooms	9/18/97
	69L-7	9709233	1	3	330	0.03	PotSigDam	C, W, A	SigDam	1		6800 sq. ft	USCG Housing	Living Areas	Yellow Exterior paint	Exterior	9/18/97
	69L-8	9709234	2	4	850	0.09	PotSigDam	C, W, A	SigDam	1		925 sq. ft	USCG Housing	Boiler room	White wall paint	Boiler room	9/18/97
	69L-9	9709235	2	4	<98	-	PotSigDam	C, W, A	SigDam	1		925 sq. ft	USCG Housing	Boiler room	Gray wall paint	Boiler room	9/18/97
	69SL-1	9709182	-	-	270	-	-	-	-	-		-		Outside	Soil sample	drip line of building	9/18/97
	69SL-2	9709183	-	-	3,700	-	-	-	-	-		-		Outside	Soil sample	drip line plus 15'	9/18/97
70	70L-1	9710031	1	-	500,000	50.00	PotSigDam	C, W, A	SigDam	1		500 sq. ft	70' Beacon Tower	Tower/Observation	Faded Red tower paint	Exterior composite	9/18/97
	70SL-1	9710113	-	-	490	-	-	-	-	-		-		Outside	Soil sample	drip line at Tower Base	9/18/97
72	72L-1	9710035	1	1	1,300	0.13	PotSigDam	C, W, A	SigDam	1		2310 sq. ft	Hanger Boiler Bldg.	Boiler Room	White paint	South wall Interior and Exterior	9/18/97
	72L-2	9710036	1	2	10,000	1.00	PotSigDam	C, W, A	SigDam	1		128 sq. ft	Hanger Boiler Bldg.	Boiler Room	Green/gray door paint	Doors	9/18/97
	72L-3	9710037	1	3	5,100	0.51	PotSigDam	C, W, A	SigDam	1		962 sq. ft	Hanger Boiler Bldg.	Boiler Room	Blue/gray inner wall	Walls Interior	9/18/97
	72L-4	9710038	1	4	3,400	0.34	PotSigDam	C, W, A	SigDam	1		750 sq. ft	Hanger Boiler Bldg.	Boiler Room	Red/gray floor paint	Floor	9/18/97
	72SL-1	9710118	-	-	120	-	-	-	-	-		-	Hanger Boiler Bldg.	Outside	Soil sample	drip line of buildings	9/18/97
	72SL-2	9710119	-	-	48	-	-	-	-	-		-	Hanger Boiler Bldg.	Outside	Soil sample	drip line plus 15'	9/18/97
73	73L-1	9710032	1	-	46,000	4.60	PotSigDam	C, W, A	SigDam	1		406 sq. ft	Boiler Building AST	Tank (AST)	Green surface paint	Exterior composite	9/18/97
	73SL-1	9710114	-	-	460	-	-	-	-	-		-	Boiler Building AST	Outside	Soil sample	drip line of AST	9/18/97
	73SL-2	9710115	-	-	500	-	-	-	-	-		-	Boiler Building AST	Outside	Soil sample	drip line plus 15'	9/18/97
74	74L-1	9710033	1	-	120,000	12.00	PotSigDam	C, W, A	SigDam	1		1145 sq. ft	USCG ASTs	Tanks	Silver paint on AST legs (same as AST)	Composite	9/18/97
	74L-1B	9711166	1	-	190,000	19.00	PotSigDam	C, W, A	SigDam	1		1145 sq. ft	USCG ASTs	Tanks	Silver paint on AST legs (same as AST)	Composite	9/18/97
	74L-2	9710034	1	-	68,000	6.80	PotSigDam	C, W, A	SigDam	1		1145 sq. ft	USCG ASTs	Tanks	Silver paint on AST legs (same as AST)	Composite	9/18/97
	74SL-1	9710116	-	-	810	-	-	-	-	-		-	USCG ASTs	Outside	Soil sample	perimeter dripline of AST's	9/18/97
	74SL-2	9710117	-	-	88	-	-	-	-	-		-	USCG ASTs	Outside	Soil sample	drip line plus 15'	9/18/97
75	75L-1	9709237	0	1	16,000	1.60	PotSigDam	C, W, A	SigDam	1		15347 sq. ft	Hangar	Exterior	White ext. paint	Exterior	9/18/97
	75L-2	9709238	0	1	44,000	4.40	PotSigDam	C, W, A	SigDam	1		15347 sq. ft	Hangar	Exterior	White ext. paint	Exterior	9/18/97
	75L-3	9709239	0	1	170,000	17.00	PotSigDam	C, W, A	SigDam	1		7728 sq. ft	Hangar	Hangar Doors	Green hangar door paint	Inside & Outside doors	9/18/97
	75L-0	9709236	1	2	9,400	0.94	PotSigDam	C, W, A	SigDam	1		29540 sq. ft	Hangar	Offices/Qtrs.	Yellow Upstairs paint (fiber board)	Upstairs	7/22/97
	75L-5	9709241	1	2	4,600	0.46	PotSigDam	C, W, A	SigDam	1		12660 sq. ft	Hangar	Offices/Qtrs.	Green Interior wall, fiber board and flex board	Interior	9/18/97
	75L-4	9709240	2	3	67,000	6.70	PotSigDam	C, W, A	Dam	2		12464 sq. ft	Hangar	Hangar	Grey interior wall; transite	Interior	9/18/97
	75L-6	9709242	2	3	2,800	0.28	PotSigDam	C, W, A	Dam	2		12464 sq. ft	Hangar	Hangar	White interior; transite	Interior	9/18/97
	75SL-1	9709186	-	-	450	0.05	-	-	-	-		-		Outside	Soil sample	drip line of buildings	9/18/97
	75SL-2	9709187	-	-	130	-	-	-	-	-		-		Outside	Soil sample	drip line plus 15'	9/18/97
77	77L-1	9710030	1	-	14,000	1.40	PotSigDam	C, W, A	SigDam	Debris		2600 sq. ft	PNA Terminal	Terminal	Red paint outside surface	Exterior	9/18/97

*Dust wipe results in µg/sq ft

Site	Sample Number	Lab Number	Funcl Space	Hmat Number	PRM Result	Percent LPB	Potential for Disturbance	Disturb Source	Condition	Haz Rank	Recomd Action	Approximate Quantity	Building	Room Description	Material Description	Sample Location	Date Sampled
	77SL-1	9710111	-	-	51	0.01	-	-	-	-		-	PNA Terminal	Outside	Soil sample	drip line of building slab	9/16/97
	77SL-2	9710112	-	-	850	-	-	-	-	-		-	PNA Terminal	Outside	Soil sample	Gross surface composite	9/16/97
78	78L-1	9710028	1	1	430,000	43.00	PotSigDam	C, W, A	SigDam	1		750 sq. ft	Air Traffic Control Tower	Tower/Control room	Faded Red structure paint	Exterior	9/16/97
	78L-2	9710029	1	2	190,000	19.00	PotSigDam	C, W, A	SigDam	1		1500 sq. ft	Air Traffic Control Tower	Tower/Control room	White structure/building paint	Tower legs	9/16/97
	78SL-1	9710110	-	-	800	-	-	-	-	-		-	Air Traffic Control Tower	Tower/Control room	Soil sample	drip line of tower	9/16/97
80	80L-1	9710003	1	1	300,000	30.00	PotSigDam	C, W, A	SigDam	1		660 sq. ft	Localizer	Electronics	Faded Red exterior	Wall composite	8/11/97
	80L-2	9710004	1	2	140,000	14.00	PotSigDam	C, W, A	SigDam	1		660 sq. ft	Localizer	Electronics	White exterior	Wall composite	8/11/97
	80L-3	9710005	1	3	68,000	6.80	PotSigDam	C, W, A	SigDam	1		336 sq. ft	Localizer	Electronics	Gray interior (4' up wall)	East wall	8/11/97
	80L-4	9710006	1	4	69,000	6.90	PotSigDam	C, W, A	SigDam	1		854 sq. ft	Localizer	Electronics	White interior	South wall	8/11/97
	80SL-1	9710124	-	-	11,000	-	-	-	-	-		-	Localizer	Outside	Soil sample	drip line of buildings	8/11/97
	80SL-2	9710125	-	-	65	-	-	-	-	-		-	Localizer	Outside	Soil sample	drip line plus 20'	9/13/97
82	82L-1	9710007	1	1	2,900	0.29	PotSigDam	C, W, A	SigDam	1		32 sq. ft	Annette Inn	Apartments	Window trim, brown	Apt	8/11/97
	82L-2	9710008	1	2	3,900	0.39	PotSigDam	C, W, A	SigDam	1		612 sq. ft	Annette Inn	Apartments	Bedroom, lavender	Apt	8/11/97
	82L-3	9710009	1	3	3,700	0.37	PotSigDam	C, W, A	SigDam	1		705 sq. ft	Annette Inn	Apartments	Bedroom, pink under paint	Apt	8/11/97
	82L-4	9710010	1	4	2,000	0.20	PotSigDam	C, W, A	SigDam	1		705 sq. ft	Annette Inn	Apartments	Bedroom, pink	Apt	8/11/97
	82L-5	9710011	1	5	2,200	0.22	PotSigDam	C, W, A	SigDam	1		1850 sq. ft	Annette Inn	Apartments	Kitchen, green/blue	Apt	8/11/97
	82L-6	9710012	1	6	4,200	0.42	PotSigDam	C, W, A	SigDam	1		3178 sq. ft	Annette Inn	Apartments	White exterior	Apt	8/11/97
	82L-7	9710013	2	1	130,000	13.00	PotSigDam	C, W, A	SigDam	1		800 sq. ft	Annette Inn	Boiler Bldg	White exterior	Boiler room	8/11/97
	82L-8	9710014	2	2	110,000	11.00	PotSigDam	C, W, A	SigDam	1		40 sq. ft	Annette Inn	Garrison	Dark blue door paint	Officers Quarters	8/11/97
	82L-9	9710015	2	3	9,500	0.95	PotSigDam	C, W, A	SigDam	1		900 sq. ft	Annette Inn	Garrison	Blue/green interior	Officers Quarters	8/11/97
	82L-10	9710016	2	4	3,400	0.34	PotSigDam	C, W, A	SigDam	1		3400 sq. ft	Annette Inn	Garrison	Dark red roof	Mess hall roof	8/11/97
	82SL-1	9710126	-	-	1,100	-	-	-	-	-		-	Annette Inn	Outside	Soil sample	drip line of building	9/13/97
	82SL-2	9710127	-	-	50	-	-	-	-	-		-	Annette Inn	Outside	Soil sample	drip line plus 20'	9/13/97
85	85L-1	9709188	1	-	800	0.08	PotSigDam	C, W, A	SigDam	1		2430 sq. ft	Tropos Relay Station	Electronics	White interior paint	Wall composite	8/11/97
	85L-2	9709189	1	-	55,000	5.50	PotSigDam	C, W, A	SigDam	1		20 sq. ft	Tropos Relay Station	Electronics	Gray paint on pipe (interior)	South edge	8/11/97
	85L-6	9709193	1	-	1,600	0.16	PotSigDam	C, W, A	SigDam	1		3864 sq. ft	Tropos Relay Station	Electronics	White/gray exterior paint	Wall composite	9/13/97
	85L-3	9709190	2	-	1,400	0.14	PotSigDam	C, W, A	SigDam	1		9300 sq. ft	Tropos Relay Station	Electronics	Green-Gray Tropos tower/dish paint	South tower	8/11/97
	85L-4	9709191	2	-	39,000	3.90	PotSigDam	C, W, A	SigDam	1		1960 sq. ft	Tropos Relay Station	Electronics	Blue-Green Electrical raceway paint	Composite	8/11/97
	85L-5	9709192	2	-	12,000	1.20	PotSigDam	C, W, A	SigDam	1		96 sq. ft	Tropos Relay Station	Electronics	Silver-Gray Tower footing paint	Southwest footing	8/11/97
	85SL-1	9710128	-	-	280	-	-	-	-	-		-	Tropos Relay Station	Outside	Soil sample	drip line of buildings	9/13/97
	85SL-2	9710129	-	-	<44	-	-	-	-	-		-	Tropos Relay Station	Outside	Soil sample	drip line plus 15'	9/13/97
86	86L-1	9709314	1	-	170	0.02	PotSigDam	A	SigDam	1		1112 sq. ft	Satellite Tracking Station	Electronics	White Surface paint	Wall composite	9/13/97
	86SL-1	9710099	-	-	63	-	-	-	-	-		-	Satellite Tracking Station	Outside	Soil sample	drip line of Structure	9/13/97

*Dust wipe results in µg/sq ft

APPENDIX C

APPLICABLE REGULATIONS

APPLICABLE REGULATIONS

A. Title 29 CFR Part 1910
General Occupational Safety and Health Standards
Subpart E. Means of Egress
Subpart I. ***Personal Protective Equipment***
Subpart Z. Toxic and Hazardous Substances

B. Title 29 CFR Part 1926
Safety and Health Regulations for Construction
Subpart C. General Safety and Health Provisions
Subpart D. Occupational Health and Environmental Controls
Subpart F. Fire Protection and Prevention

C. Title 40 CFR Part 745
Environmental Protection Agency
Lead; Requirements for Lead-Based Paint Activities; Proposed Rule
Issued Friday, September 2, 1994

D. Title 49 CFR 100-180 and 382
Department of Transportation

E. Federal Standard 313B
Material Safety Data Sheets

F. American National Standard Institute (ANSI)
Z9.2-79 Local Exhaust Systems
Z87.1-89 Eye and Face Protection
Z88.2-80 Practices for Respiratory Protection

G. International Fire Code Institute
Uniform Fire Code (UFC) 1994 UFC Standards

H. National Fire Protection Association (NFPA)
NFPA 701 (1989) Fire Tests for Flame-Resistant Textiles and Films

APPENDIX D

LEAD PAINT REMEDIATION METHODS

APPENDIX D

Lead Paint Remediation Methods (from Means, 1997a)

Lead paint remediation can be accomplished by the following methods:

1. Abrasive blasting
2. Chemical stripping
3. Power tool cleaning with vacuum collection system
4. Encapsulation
5. Removal and replacement
6. Enclosure

Each of these methods has strengths and weaknesses depending on the specific circumstances of the project. The following is an overview of each method.

1. **Abrasive blasting** is usually accomplished with sand or recyclable metallic blast. Before work can begin, the area must be contained to ensure the blast material with lead does not escape to the atmosphere. The use of vacuum blast greatly reduces the containment requirements. Lead abatement equipment that may be associated with this work includes a negative air machine. In addition, it is necessary to have an ***industrial hygienist*** monitor the project on a continual basis. When the work is complete, the spent blast sand with lead must be disposed of as a hazardous material. If metallic shot was used, the lead is separated from the shot and disposed of as hazardous material. Worker protection includes disposable clothing and respiratory protection.

2. **Chemical stripping** requires strong chemicals be applied to the surface to remove the lead paint. Before the work can begin, the area under/adjacent to the work area must be covered to catch the chemical and removed lead. After the chemical is applied to the painted surface, it is usually covered with paper. The chemical is left in place for the specified period, then the paper with lead paint is pulled or scraped off. The process may require several chemical applications. The paper with chemicals and lead paint adhered to it, plus the containment and loose scrapings collected by a HEPA (high efficiency particulate air filter) vacuum, must be disposed of as a hazardous material. The chemical stripping process usually requires a neutralizing agent and several wash downs after the paint is removed. Worker protection includes neoprene or other compatible ***protective clothing*** and respiratory protection with face shield. An industrial hygienist is required intermittently during the process.

3. **Power tool cleaning** is accomplished using shrouded needle blasting guns. The shrouding with different end configurations is held up against the surface to be cleaned. The area is blasted with hardened needles and the shroud captures the lead with a HEPA vacuum and deposits it in a holding tank. An industrial hygienist monitors the project, and protective clothing and a respirator are required until air samples prove otherwise. When the work is complete, the lead must be disposed of as a hazardous material.

4. **Encapsulation** is a method that leaves the well-bonded lead paint in place after the peeling paint has been removed. Before the work can begin, the area under/adjacent to the work area must be covered to catch the scrapings. The scraped surface is then washed with a detergent and rinsed. The prepared surface is covered with approximately 10 mils of paint. A reinforcing fabric can also be embedded in the paint covering. The scraped paint and containment must be disposed of as hazardous material. Workers must wear protective clothing and respirators.

5. **Removal and replacement** is an effective way to remove lead paint from windows, gypsum walls and concrete masonry surfaces. The painted materials are removed and new materials are installed. Workers should wear a respirator and Tyvek suit. The demolished material must be disposed of as hazardous waste if it fails the TCLP (toxicity characteristics leaching procedure) test.

6. **Enclosure** is the process that permanently seals lead-painted materials in place. This process has many applications, such as covering lead-painted drywall with new drywall; covering exterior construction with Tyvek paper, then residing, or covering, lead-painted structural members with aluminum or plastic. The seams on all enclosing materials must be securely sealed. An industrial hygienist monitors the project, and protective clothing and a respirator are required until air samples prove otherwise.

All the processes require clearance monitoring and wipe testing as required by the hygienist.